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N. C. AGRICULTURAL EXTENSION SERVICE

OF THE

STATE COLLEGE AND
STATE DEPARTMENT OF AGRICULTURE AND
U. S. DEPARTMENT OF AGRICULTURE COOPERATING

B. W. KILGORE, DIRECTOR
RALEIGH

SEVENTH ANNUAL REPORT

Fiscal Year Ending June 30, 1921. Statistical Report Year Ending December 1, 1921

DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS
OF MAY 8 AND JUNE 30, 1914

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LETTER OF SUBMITTAL

Raleigh, N. C., January, 1, 1922.

North Carolina Agricultural Extension Service
Office of the Director

To His Excellency, Cameron Morrison,
Governor of North Carolina.

Sir:—I have the honor to submit herewith report of the operations of the North Carolina Agricultural Extension Service, conducted jointly by the North Carolina State College of Agriculture and Engineering and the North Carolina State Department of Agriculture, in cooperation with the Federal Department of Agriculture, for the year ended June 30, 1921. This work is under the immediate direction of the "Joint Committee for Agricultural Work" provided for in Chapter 68 of the Public Laws of 1913, and the report is made in accordance with the requirements of the Act of Congress approved May 8, 1914, and known as the Smith-Lever Act.

Very respectfully,

B. W. Kilgore,
Director.

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R. W. Green—Agricultural Editor
A. F. Bowen—Bursar
Miss S. D. Jones—Bursar
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H. C. Evans—Auditor and Executive Assistant

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H. B. Mann	Assistant in Soils	S. F. Davidson	Assistant in Soil Survey
R. Y. Winters	Plant Breeding Agronomist	W. A. Davis	Assistant in Soil Survey
S. W. Hill	Assistant in Plant Breeding	†R. E. Devereux	Assistant in Soil Survey
P. H. Kime	Assistant in Plant Breeding	W. D. Lee	Assistant in Soil Survey

A. R. Russell—Asst. in Field Experiments

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F. W. Sherwood	Assistant Chemist	G. L. Arthur	Assistant Chemist
W. G. Haywood	Fertilizer Chemist	B. C. Williams	Assistant Chemist

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Franklin Sherman, Jr.	Chief in Entomology	†C. L. Sams	Bee-Keeping
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R. W. Leiby	Assistant Entomologist	C. S. Brimley	Assistant Entomologist
V. R. Haber	Assistant Entomologist	T. D. Mitchell	Assistant Entomologist

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J. P. Pillsbury	Horticulturist	W. W. McGill	Extension Horticulturist

C. F. Williams—Assistant Horticulturist

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STANLEY COMBS---Dairy Experimenter
B. F. KAUPP
Poultry Investigator and Pathologist
†J. A. AREY---Dairy Farming
†W. W. SHAY---Swine Extension
†A. G. OLIVER---Poultry Extension
JOHN E. IVEY---Asst. Poultry Investigations
†F. R. FARNHAM---Assistant in Dairy Farming
†A. C. KIMREY---Assistant in Dairy Farming
†D. R. NOLAND---Assistant in Dairy Farming
†F. T. PEDEN---Assistant in Beef Cattle
EARL HOSTETLER,
Assistant in Beef Cattle and Swine
†GEORGE EVANS---Assistant in Sheep Extension

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F. A. WOLF---Plant Pathologist
S. G. LEHMAN---Assistant in Bacteriology

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†V. W. LEWIS---Livestock Marketing
FRANK PARKER---Agricultural Statistician
WM. H. RHODES, JR.---Assistant Statistician
WM. D. JONES, JR.---Census Statistician

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†J. M. JOHNSON---Farm Management

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H. H. B. MASK---Assistant State Agent
E. S. MILLSAPS---District Agent, Piedmont District
T. D. McLEAN---District Agent, Central District
O. F. McCRARY---District Agent, Northeastern District
E. W. GAITHER---District Agent, Southeastern District

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Perquimans	L. W. ANDERSON	Hertford
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Wilson	B. T. FERGUSON	Wilson
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NEGRO AGENTS

J. D. WRAY, Farm Makers' Club Agent, Assistant in Charge of Negro Boys Club Work—Greensboro
L. E. HALL, District Agent—Chadbourn

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E. C. LACKEY, Winston-Salem—Forsyth, Davie and Yadkin Counties
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F. D. WHARTON, Henderson—Vance, Warren and Granville Counties
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HOME DEMONSTRATION WORK

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Miss Maude E. Wallace	Assistant State Home Demonstration Agent, Raleigh
Miss Mamie Sue Jones	Tidewater District Agent, Washington
Mrs. Estelle T. Smith	Eastern District Agent, Goldsboro
Mrs. Cornelia C. Morris	Central District Agent, Henderson
Miss Martha Creighton	Piedmont District Agent, Greensboro
Mrs. Mattie M. Henley	Special Agent, Sanford

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Hertford	Miss Myrtle Swindell	Winton
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Johnson	Miss Minnie L. Garrison	Smithfield
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Mecklenburg	Miss Marion Davis	Charlotte
Moore	Miss Bertha Proffitt	Carthage
Nash	Miss Marion Swain	Nashville
New Hanover	Miss Florence Jeffress	Wilmington
Northampton	Miss Nancy McLawhorn	Jackson
Onslow	Miss Margaret Martin	Jacksonville
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Rockingham	Mrs. Ethel Wells Moore	Reidsville
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Wilson	Mrs. Willie White Boyette	Wilson

The members marked with "*" are members of the Joint Committee for Agricultural Work, and the Station is under their direction.

†In cooperation with the United States Department of Agriculture.

SEVENTH ANNUAL REPORT

OF THE

NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

For the Year Ending June 30, 1921

Being the Fifteenth Year of Extension Work in the State

B. W. KILGORE, *Director*

R. W. GREEN, *Agricultural Editor*

Substantial progress toward better methods of farming and home making has been made through the efforts of the extension service during the year, and this despite retrenchment on the part of several counties in supporting the work of county agents.

Farmers have called upon members of the extension service for assistance in organizing local and state-wide associations for marketing, which include livestock, fruits and vegetables, peanuts, cotton and tobacco. The peanut growers of North Carolina and Virginia perfected organization of their cooperative marketing association in time to handle the crop of 1921, while both cotton and tobacco associations are assured of handling the bulk of these two crops produced in 1922.

With the approach of the boll weevil from South Carolina farmers in the cotton producing counties of the state are becoming more interested in diversification and extension specialists have received many calls for assistance in laying out programs for producing livestock and field crops. Reports from all over the state indicate that farmers are planting more pastures as a part of their program for livestock production.

The home demonstration agents have been stressing the need for more milk in the diet and in connection with the Animal Industry Division have carried the message of health to many thousands of children. The first milk campaign in the South was held at Winston-Salem and is estimated to have increased milk consumption in that city by 40 per cent. Through organized clubs of women and girls the home demonstration agents have done much to improve home and community life through demonstrations and contests in cooking, dress making, and millinery. They have also fostered poultry club work, which has made marked progress during the year.

STATISTICAL SUMMARY

Although it is not possible to reduce all the activities of the members of the extension service to figures, an idea of the wide range and quantity of service rendered to the rural population of the state may be gained from the following statistical review of some of the things accomplished.

Members of the extension divisions sent out 406,965 letters, mailed out 91,385 bulletins, and had 5,295 articles published in newspapers and magazines in carrying on the work during the year.

Agents and specialists attended 21,012 meetings, the total attendance at which amounted to 880,223, and assisted in organizing 239 communities

in farm and home interests, with a total membership in these new organizations of 7,723. The total enrollment for the year for farm men and women and boys and girls clubs is 54,251.

Improvement and construction work reports include 3,571 farm buildings erected or improved, 68 silos built, 598 water systems, 1,070 lighting systems, 13 telephone systems, and 2,258 home conveniences installed. There were 1,010 home grounds improved, 3,011 sanitary conditions improved, and 188 woodlots improved.

There are now 875 dipping vats in the state and 168,649 head of cattle were dipped during the year. One hundred and fifty-five drainage systems were installed, 4,303 acres drained by tiling and 9,308 by ditching and terraces laid off on 1,821 farms. Demonstrations in field crops were conducted on 8,439 farms and orchard demonstrations on 572 orchards containing 39,824 acres.

Agents and specialists made 66,850 visits, traveled 1,407,356 miles, and 524,151 calls were made on them for personal services.

Through the efforts of agents 2,814 home gardens were planted or improved, 816,373 containers filled, and 2,106,931 pounds of pork cured by club members. Agents gave 3,535 food demonstrations.

Other work of the extension service includes 500 potato storage houses planned, 64,246 bales of cotton classed, 25,000 bushels of good seed secured for planting next year, 79,838 fertilizer, manure and lime services rendered, 185 fairs held, and 79,450 bulletins printed. There are now 324 buying and selling organizations in the state, which did a total business this year of $509,333.

CHANGES IN STAFF

Changes in staff at headquarters since the last annual report include the following:

Resignations: H. B. Krausz, farm forester; J. H. Henley, specialist in credit unions; A. C. Foster, extension plant pathologist.

Appointments: W. W. McGill, extension horticulturist; James M. Gray, assistant director; Fred R. Yoder, specialist in rural credits; V. W. Lewis, specialist in livestock marketing; C. F. Williams, assistant horticulturist.

COOPERATION WITH OTHER INSTITUTIONS AND AGENCIES

Many other educational institutions and agencies in the state have given cordial support to the agricultural extension service, among which are the North Carolina College for Women, the Negro A. and T. College, Peace Institute, and the State Department of Education.

The press has helped loyally in encouraging better farming and rural life and agents and specialists have been assisted by banks, boards of trade, and other commercial organizations in promoting community improvements and club work in the counties.

FARM DEMONSTRATION WORK

In practically every county farm demonstration agents were called upon to assist farmers in organization of local boards of agriculture, community clubs or cooperative marketing associations. There are now 35 county organizations giving full support to the work of the county agents, in addition to the clubs and associations giving their attention to special problems such as seed improvement, better livestock, cooperative marketing, and crop demonstrations. Five counties have organized farm bureaus during the year.

There are now 324 buying and selling organizations among farmers in the state, of which 57 have been organized during the year. These organizations did a total business for the year of $509,333 at a saving to members estimated at $124,817.

Crop demonstrations numbered 8,439, of which reports from 5,682 were obtained. The reports show average yields for corn of 44.2 bushels, which is more than twice as large as the state average. The average acre yield in cotton demonstrations was 1,338 pounds of seed cotton, compared with an average for the state estimated at 768 pounds.

Through the efforts of agents many farmers were induced to plant pastures during the year, while considerable progress was made in demonstrating the value of hay, forage and cover crops on individual farms. Detailed figures covering demonstrations with alfalfa, crimson clover and other forage crops will be found included under the report of the state agent.

BOYS' AGRICULTURAL CLUBS

Twenty-two counties reported organized club work with white boys and 25 counties with negro boys. There are 321 organized agricultural clubs in the state, which participated in 1,083 community meetings and 140 county club meetings during the year. Twenty-four club encampments and short courses were held, at which club members received technical instruction in better farming and home making and took part in plays, games and contests. These encampments have proved popular with club members and offer an excellent opportunity to furnish instruction, recreation and to develop club spirit.

Club exhibits were featured at 33 fairs this year, including the State Fair, and club members won a total of about $3,000 in prizes on their crops and animals.

WORK WITH NEGROES

Work with negroes was conducted in six counties and parts of 14 other counties. There are now 122 negro farmers' clubs with a total membership of 6,690. Reports from 324 corn growing demonstrations gave an average yield of 35.7 bushels an acre on 2,186 acres. This compares with less than 20 bushels as a state average for all farmers. On cotton demonstrations negro farmers averaged 1,200 pounds to the acre against a general state average of 768 pounds. Over 300 acres of crimson clover were planted by negro farmers who previously have paid practically no attention to this crop.

The value of grazing crops for livestock has been stressed during the year along with the introduction of improved strains of dairy cattle and hogs. Poultry improvement work reached 400 farms, through 100 demonstrations in culling, feeding and better houses.

The summaries of work with negroes show considerable progress in improving buildings and dwelling houses.

HOME DEMONSTRATION AND GIRLS' CLUBS

On account of the financial condition of many county treasuries, 10 counties had to suspend home demonstration work in 1921, but all but two of these have asked to be reinstated in 1922. Forty-nine counties reported in 1921 recording 539 girls' clubs, 544 women's clubs, and 108 community clubs, making a total of 1,191 clubs, with a total membership of 25,370. Agents held 8,006 meetings during the year, with a total attendance of 388,946. Ten community houses were built this year.

The work in nutrition was carried on in practically every club during the year, and 2,341 demonstrations given in the care, selection and preparation of food. Two city milk campaigns—one at Asheville and one at Winston-Salem—and seven county wide campaigns emphasizing the value of milk were conducted. In Winston-Salem 9,947 people were reached directly, and two months after the campaign records show that the consumption of milk in this city had increased 40 per cent. In both city campaigns talks were made to school children and to groups in factories, mills and laundries.

The number of demonstrations in the preservation of foods put on by agents totaled 1,194, and there were 816,373 containers filled. The estimated value of these products is $381,747.40.

Fifty campaigns were held during the year, featuring bread, milk, hot school lunches, pressure cookers, grapes, dairies, home conveniences, housekeepers' week, home and school improvements, county rallies, beautification of premises, and cooperative marketing.

There has been no abatement of the interest in clothing work and 21 dress schools and 42 home millinery schools were held, with a regular attendance of from 50 to 200. At these schools women in the audience acted as models and dresses and hats of both good and bad forms and colors to suit the individual were demonstrated. In all there were 2,566 demonstrations in clothing given.

Reports show that many club girls, with the assistance and advice of home agents, have made over their old furniture and improved the interior of their homes by treating floors and furniture, making draperies, rugs etc. The beautification of home, school, and church premises has also been a feature in this work.

Poultry work has been carried on in 25 counties in cooperation with the poultry specialist, and at the State Fair five counties sent teams of boys and girls to judge exhibits and give reasons for decisions.

Club women and girls have found profitable markets for their products by using parcel post, organizing curb markets, and commodity exchanges.

AGRONOMY

Help has been given this year to 17 communities that have chosen one variety of cotton and these communities are now doing plant-to-row cotton breeding. As a result of this and previous work, they have saved 22,600 bushels of improved seed this season. The cotton improvement work has extended to 32 new communities in 20 counties, and these communities will save more than 200,000 bushels of seed. It is estimated that improved cotton seed last year increased growers' incomes over $480,000.

Fourteen communities in 11 counties have received help in the selection of seed corn and 11 communities in 8 counties have been helped in testing corn varieties.

Four wheat variety tests were conducted in three Piedmont counties, 150 bushels of pedigreed Leap's Prolific wheat sold to growers, and over 4,000 bushels of seed of this strain saved by communities in 22 counties. Sixty-five bushels of pedigreed Abruzzi rye have been sold from the Central farm. This strain yielded 5.8 bushels per acre more than the best commercial strain on the market.

Pedigreed strains of Mammoth Yellow, Virginia, and Haberlandt soybeans have been established in 11 communities, and recent reports indicate that 48, 56 and 210 bushels respectively will be saved for seed from these varieties this year. The acreage of all legumes has been

increased over all the state during the past year, and in one county alone, where three years ago the farmers were practically unacquainted with soybeans, 900 bushels of these were planted last spring.

Four field demonstrations are now in progress to show the effect of the use of lime on legumes grown in rotation on Piedmont and mountain soils, and successful demonstrations have been carried through in Alexander, Stanly, and Union counties. These demonstrations have aroused considerable interest among farmers. Meetings were held on the different fields to study the effects of lime upon the crops.

Sugar plant work has been carried on during the year in about 20 counties, and about 30 meetings were held in the interest of sorghum. Over a thousand farmers were reached in this way. Variety demonstrations were planted in six sections of the state, and 25 farmers had demonstrations with sugar beets and 20 with sorghum. Nearly 600 letters regarding sugar plant work were written during the year and over 2,000 farmers reached by public addresses and personal interviews.

ANIMAL INDUSTRY

A large number of sheep demonstrations have been held during the year, including 50 in shearing and wool tying, with an attendance of 266; 60 in docking and castrating, where 312 lambs were docked and 217 castrated, and which 265 persons attended; 7 at which trimming, fitting, and culling were demonstrated, with an attendance of 42; and a number of senior student demonstrations at which 58 sheep were sheared, 42 lambs docked, and 24 lambs castrated. During the year 49 purebred rams, 51 purebred ewes, and 120 grade ewes have been purchased for sheep men in the state. In cooperation with the Division of Markets, 40,000 pounds of wool has been marketed for farmers by having the wool made into blankets and aiding in their sale. More than 4,000 pairs of blankets have been manufactured and farmers have secured from 50 cents to $1.25 a pound for their wool in this way. A cooperative carload of lambs was shipped to Philadelphia and one to Richmond, bringing farmers much more than they would have received locally.

One of the unique features of the work this year was the "moving sheep school"—a truck which carried purebred sheep, shearing, wool tying, docking, and castrating equipment, blankets, models of barns, and other necessities of the sheep business. This truck visited eight of the largest fairs in the state.

Assistance has been given in marketing about 1,500 head of cattle, and at the present time arrangements are being made to market five carloads for stockmen in western North Carolina. A large number of purebred beef cattle have been placed on North Carolina farms, plans for barns, silos, and other construction work furnished, and much time and work given to promoting permanent pastures.

In the dairy extension work assistance and plans for building and remodeling were furnished 63 persons, and in the cheese area plans were furnished for 10 barns, 10 silos, and one milk house. During the year 1,460,540 pounds of butter have been manufactured by the different plants in the state, and 32 dairy farmers have carried on testing work, at a cost to them of $1,737.64. Orders have been taken for three carloads of grade cows to be used as family cows in the eastern part of the state.

Two milk campaigns were held, one at Winston-Salem and one at Asheville, which greatly increased the consumption of milk in these two places where the average consumption was very low. The campaigns were of an educational nature, with special talks to school children, grown-ups, and factory workers. Window and booth demonstrations and exhibits were given, posters displayed, and school essays written.

In connection with the swine extension work, demonstrations in feeding have been held with 125 hogs and good results shown of proper feeding and care. Other demonstrations have included building colony houses, self-feeders, and breeding crates. Assistance has been given farmers in buying breeding stock, several sales held, and short course schools held in three counties featuring instruction in swine husbandry.

The poultry club work has been carried on successfully during the year, there being 768 demonstrations held and 134 meetings, with a total attendance of 14,762. One of the features of this work this year was the exhibits of North Carolina poultry at Madison Square Garden Show, which took high honors. Five poultry judging contests have been conducted and 17 educational exhibits shown.

ENTOMOLOGY

Winter spraying of orchards, potato spraying, boll weevil, and seed potato maggot have been the chief subjects of work this year, and in connection with these projects 14 counties were visited and worked in and 21 meetings or demonstrations held, with a total attendance of over 500. Four press articles and an extension circular have been prepared, over 150 copies of larger publications and 900 circular letters sent out, and 3,000 copies of a small circular on the boll weevil sent out.

In connection with beekeeping 38 counties have been worked in during the year and 218 meetings and demonstrations held, with a total attendance of 3,183. The subjects emphasized are the behavior of bees, management, queen rearing and re-queening, transferring, better methods, and preparation for winter and for honeyflow. This work is especially intended to encourage the development of commercial beekeeping, and several persons have announced their intention of making beekeeping a specialty or main business.

HORTICULTURE

The most important commercial and home horticultural industries in the state have been given special attention during the year. These include the sweet potato industry in the Coastal Plain and Piedmont sections, the early Irish potato industry in the Coastal Plain, the apple industry and the late Irish potato industry in the Mountain section, the peach industry in the Sand Hills, and home gardens and orchards all over the state.

Commercial orchards were selected in five nearly contiguous apple producing counties, in which are located plots for use in demonstrating pruning and spraying. At each orchard there are three different plots—one both pruned and sprayed, the second sprayed but not pruned, and the third a check plot neither pruned nor sprayed. Meetings and demonstrations were conducted in these orchards.

It has been the plan of the division to plant one or more one-acre demonstration home orchards in each county to encourage the planting of home orchards on the farm. During the past four years nearly 150 of the orchards have been planted and a majority of them have been satis-

factory. In almost every case the degree of success of the orchards has been in proportion to the amount of attention given them.

The sweet potato storage house construction campaign was continued during the year in a very active manner. In cooperation with the county agents, boards of trade and other organizations, meetings were held to stimulate interest in storage house construction as well as to supply information regarding all phases of the subject. Demonstrations in harvesting and handling, construction of the house and its operation were given. Over 500 blueprint plans of houses of different capacities were mailed to prospective builders who requested them. It is estimated that not less than 60,000 bushels capacity of new storage houses were constructed during the year, which brings the total storage capacity of the state to approximately 400,000 bushels.

The work of the division has been conducted largely through county and home demonstration agents, boards of trade, fairs, fruit shows, and different local agencies. Use has been made of the daily press, circular letters and circulars in aiding campaigns and in the dissemination of information.

During the year a total of 68 meetings in 30 counties were held, with a total attendance of 2,496. The workers traveled 8,010 miles by rail and 964 miles by automobile in conducting the work.

MARKETS AND RURAL ORGANIZATION

A number of successful cooperative marketing associations have been organized with the aid of this division this year, including the Mount Olive Truckers Association, the Scotland County Cantaloupe Association, which sold around 200,000 crates of cantaloupes, and a sweet potato marketing association in Nash and Edgecombe counties. All of these associations handled standardized products.

Considerable improvement has been made in grading and packing all fruits and vegetables as a result of the work of this division, especially Irish and sweet potatoes, strawberries, and apples. A careful study was made this year of grades for cucumbers and peaches with an idea of standardizing them next season.

The work of cotton classing and grading has made considerable progress this year, the total number of bales classed during the year being 64,247. Active interest is indicated in warehouse construction work by the numerous inquiries that have been received from all over the state. Two new warehouses having an aggregate capacity of 10,000 bales are in course of construction in the state.

No new credit unions were organized during the year but six are now being organized. Because of the bad crops and low prices received by farmers, the chief business of the unions this year has been borrowing money from the banks for the members. Ten unions report that they were able to borrow money when it was impossible for the members to borrow as individual members.

FARM DRAINAGE

Farms in 17 counties were visited for the purpose of giving advice and assistance on tile drainage. Surveys and reports have been made for 12 farms, while stakes and grades for construction were given on 10 farms for the installation of approximately seven miles of tile.

Eleven examinations of a preliminary nature on proposed drainage districts covering an area of 52,450 acres were made during the year.

Increasing interest in soil erosion is shown by calls from farmers for assistance in locating terraces and giving demonstrations in terracing. More tiles were installed and a larger number of drainage districts, covering a larger acreage, were examined than last year.

FAIRS AND EXHIBITS

Fairs held this year were as follows: 2 state (1 white and 1 negro), 10 district, 43 county, and 130 community, making a total of 185. No premiums were given this year on account of the financial condition of the Department of Agriculture. Home and farm demonstration agents helped organize community fairs and acted as judges at all fairs, explaining the reasons for awards wherever possible.

Corn and poultry clubs from several counties gave exhibits and demonstrations at the State Fair, which did much to show the general public just what the extension service is trying to do for young folks on the farms. The counties represented were Sampson, Buncombe, Cleveland, Stanly, Gaston, Catawba, Cumberland and Lincoln.

A special livestock truck was exhibited at most of the larger fairs in the state. This truck carried purebred sheep and products of wool, including blankets made from North Carolina wool by North Carolina mills.

PLANT PATHOLOGY

In cooperation with county agents over 1,000 acres of cotton were planted by cooperative growers and breeders this year, from which about 25,000 bushels of high grade seed will be obtained for planting in 1922. Work with cooperative growers was conducted in Anson, Cabarrus, Columbus, Craven, Edgecombe, Hertford, Johnston, Lenoir, Mecklenburg, Montgomery, Nash, Onslow, Pasquotank, Pitt, Robeson, Sampson, Union and Wayne counties.

Tests of Dixie-Triumph, a variety of wilt-resistant cotton which has been bred for boll weevil conditions, were made in Edgecombe, Wayne, Johnston and Sampson counties. These demonstrations proved that this type of cotton can be grown on wilt infected land and because of its earliness can be recommended where the boll weevil is present.

Tomato spraying demonstrations were given in Transylvania, Mitchell and Avery counties, and results showed that the yield from sprayed vines was larger than from unsprayed. It is estimated that 500 people sprayed their tomato vines as a result of the demonstrations.

Owing to the fact that several heavy frosts in April killed practically all of the apple crop, only two spraying applications were made last spring. The only results of spraying that can be shown are that the trees were practically defoliated this summer because left unsprayed.

Since many of the most dreaded and destructive Irish potato diseases are introduced into the South from the North in seed, tests were made of mountain-grown seed in Pasquotank, Beaufort, Wayne and Columbus counties to determine whether or not these mountain-grown seed might not give as good results as the Maine-grown. The results of these demonstrations are decidedly in favor of the mountain-grown seed, as these seed gave a more perfect stand, the plants were more vigorous, and just as good or better yield was obtained. In all cases the mountain-grown seed produced just as early maturing potatoes as those from the North.

Many fruit growers and farmers have been visited during the year, special meetings held, and personal and circular letters and literature sent out discussing plant diseases.

FARM ENGINEERING

During the year 112 propositions of home water supply and sewerage disposal have been looked over and plans given, together with bill of material and estimate of cost, and 16 demonstrations held. Sixteen locations for small hydro-electric power plants were looked over and estimates of cost and amount of power to be expected given, together with designs for the dams to be used. Advice has been given regarding other various home lighting plants and conveniences and what could be expected of them.

One hundred and thirty-five farmers have been personally advised about farm machinery of various kinds, and plans for 260 farm buildings sent out, including water towers, septic tanks, ice, hog and poultry houses, cattle, sheep and horse barns, corn cribs, water troughs, and dwelling houses. Thirty new sets of plans have been gotten up to cover some of the calls for plans we did not have. Six barns were supervised during construction and trips were often made when plans were sent out to see that they were followed.

Correspondence has been carried on regarding all these subjects and the work along all lines carried to the people through the press, by making trips to see individuals, by visiting county agents, and by holding meetings and putting on demonstrations.

One club encampment was attended where instructions were given in rope tying and gas engine operations.

PUBLICATIONS

During the year a total of 369,871 circular letters and forms were handled for the different extension divisions, of which 299,699 were mailed out by this office to agents and individuals.

Eight extension circulars, one poster, and one annual report were issued during the year, of which a total of 35,000 copies were printed. The total number of bulletins mailed was 60,431, and 18,359 sent out on special request. Mimeograph news letters have been sent to the newspapers of the state all during the year.

REPORTS OF DIVISIONS

On the following pages will be found a financial statement and detailed reports of the divisions and specialists of the extension service, which show the extent and variety of the efforts being made to improve agriculture and rural home life in North Carolina.

REPORT ON FARM DEMONSTRATION WORK

To the Director: Attached hereto you will find our annual report for the year 1921, this being the seventh under full cooperation of the State Department of Agriculture, the State College of Agriculture, and the U. S. Department of Agriculture, and fourteenth annual report of the work since its beginning.

The report is divided into five parts as follows:

1.—A combined report of adult white and negro work.
2.—A separate report of adult negro work.
3.—A separate report of white boys' club work.
4.—A separate report of negro boys' club work.
5.—A combined report of white and negro boys' club work.

The summary at the end of the report gives in concise form some of the results of the work for the year. Much of the work is of such a nature that it cannot be tabulated; neither can it be reported here without making this report too long.

WHITE AND NEGRO WORK

During the year three somewhat unusual conditions have prevailed over the state.

First: Things have not yet become normal since the war, so it has been difficult to determine, in many cases, just how to proceed.

Second: A severe drought, the worst since 1881, extended over most of the state for several months during the summer. This caused some changes in plans of cultivation, prevented the planting of winter-growing crops and greatly reduced the yield of practically all summer-growing crops.

Third: As an out-growth of previous work and the low prices of several important farm crops there arose a demand for a formation of cooperative marketing associations. A number of demonstration agents gave considerable time to this matter, especially in an educational way.

At this time the organization of marketing associations for peanuts, tobacco and cotton have been practically completed, thus bringing into existence large and strong organizations of farmers. With proper guidance such organizations should result in more stable and more profitable prices for farm crops and better prosperity, generally.

County Organizations

Independently of marketing organizations, good, strong county organizations are very effective in helping county agents to plan and carry out important county projects. Usually they are composed of both men and women, often including boys and girls, so that the home problems are given attention along with those of the farm, the home demonstration agent cooperating in the home work.

The demand for such organizations is increasing so that we expect much advancement in this matter during the next year or two. There are now 35 county organizations giving full support to white county agent work and five supporting negro work.

Beaufort County, through the influence of the county agent, is solving some of its farmers' marketing problems by holding at the county seat each Saturday, a "Marketing Day." At a specified hour farmers bring in such produce as they have for sale to a common meeting place, where the city people come to buy. The county agent instructs the farmers as to culling, grading, and putting their products into an attractive, saleable form. The price asked for their produce, by farmers, is higher than wholesale prices, but lower than those of retailers: thus farmers get more for their products while the consumers pay less.

Alamance County has a Board of Agriculture composed of two members of the County Farmers Union, two from its tobacco growers association, two farmers at large and one representative from each of the towns in the county. There are no dues or fees attached to the organization. Its object is to support county agent work and promote the general welfare of the county.

Buncombe County's organization is called Farmers' Federation. During the year it has been largely successful in promoting the building of the farm warehouses over the county for the purpose of handling farm crops, and such things as farmers buy in large quantities.

Cumberland County's Board of Agriculture is made up of a member from each township. This organization cooperates with the county agent in planning his work for the county. They hold monthly meetings regularly. It is also interested in the general development of the county.

Columbus County has an active Board of Agriculture cooperating with the county agent in all his activities in rural betterment. There is no membership fee attached to it.

Caldwell County's organization is called Chamber of Commerce. It is composed of farmers and townspeople who cooperate with the county agent in promoting the general welfare of the whole people.

Edgecombe County has a County Council of seven farmers from various sections of the county. It has full cooperation with the county agent in promoting the general interest of farmers.

One of the most active and effective organizations is the Onslow Board of Agriculture, which has sub-organizations in every community in the county. No member lives over four miles from some local organization. There are no membershipp fees. The organization and the county agent cooperate heartily in promoting all agricultural and home projects.

Pasquotank County has a Chamber of Commerce whose object is the general welfare of farmers and townspeople.

Polk County has an Agricultural Advisory Board, composed of sixteen men and women selected by the county agent, and formally appointed by the Director of Extension Service. This organization is active in promoting county agent projects. There are several other county organizations which support county agent work.

The following counties, among others, have active farm bureau organizations supporting county agent work and in other ways promoting the welfare of the people:

Forsyth, with a membership fee of $10.

Iredell, with a $10 membership fee. Any farmer or land owner may belong to the organization.

Mecklenburg County has a very active bureau composed of a number of locals with a membership fee of $10. It promotes community spirit, makes cooperative movements possible, organizes educational meetings,

promotes seven community fairs, the farmers institutes, the bull blocks, etc. All of the locals have either built, or are arranging to build, community houses for various kinds of gatherings. Through the locals practically every farm family in the county can be reached.

Nash County's bureau has rendered splendid service in promoting county agent work by procuring county funds. Its membership fee is $2.

Rutherford County's farm bureau engages in general activities, such as buying and selling, better agriculture, better homes, community pride, etc. Its fee is $10.

Community Organizations

County organizations are, usually, but not always, composed of sub-community clubs. The local organizations have proven very effective in promoting community projects in cooperation with the county agent and in supporting the larger county units. During the year 239 have been organized, with a membership of 7723.

Among such organizations may be mentioned the following:

Catawba County has a very active, efficient poultry association, a truckers association in one community and a strong sweet potato growers association.

Robeson County has a poultry association of men and women in one section of the county who buy and sell cooperatively breeding stock, feed stuff, poultry and eggs. Only purebred fowls are kept.

Cooperative Buying and Selling Organizations

During the year there has been considerable activity among farmers over the state in forming organizations to buy and sell co-operatively, through the influence of county agents and otherwise. They are also beginning to give attention to standardizing farm crops by grading, culling, better packing and the growing of one variety of crops, or one breed of animals in a community or a county. Along with this they are replacing scrub seed and live stock with improved strains. There are now 324 such organizations in demonstration territory, 57 of which have been organized during the present year. In the last twelve months these organizations have bought to the amount of $411,483, at a saving of $93,393, and have sold to the amount of $97,850, at a saving of $31,424. This makes the total bought and sold $509,333, and the total saved $124,817, or about 25 per cent. The commodities handled included fertilizers, chemicals for spraying, lime, seeds, cattle, hogs, poultry, corn, potatoes, peanuts, crates, baskets, vegetables and fruits.

Crop Demonstrations

Demonstration work with crops was carried on with corn, cotton, tobacco, small grain, hay, forage or cover crops, summer and winter legumes, Irish and sweet potatoes and tomatoes.

The average yield of corn of white demonstrators on 28,834 acres was 44.2 bushels per acre. With negroes there were 360 demonstrators with 2572 acres producing an average of 35.7 bushels per acre, thus making a total average of a little over 40 bushels per acre, or twice the average yield of the state as a whole.

Taking all crops together there were conducted 8,439 demonstrations with an acreage of 67,849. Out of this number of demonstrators 5,682 reported. There were 20,380 cooperators, with an acreage of 113,257. (A demonstrator is a farmer conducting a farm demonstration under the supervision and with the direct cooperation of the county agent. A coop-

erator is a farmer conducting a similar demonstration, but who is not ordinarily visited by the county agent.)

Demonstration Home Orchards

For the purpose of getting a larger amount of fruit and a greater variety on the farm and demonstrate just the kind of orchards needed and how to care for them, county agents have established 572 of them with 39,827 trees. Of this number of orchards there are 200 of apple, 203 of peach, and 169 others. Two hundred seven orchards with 56,737 trees were planted during the year, and agents have pruned 2,463 orchards with 174,733 trees: sprayed 979 with 79,654 trees: treated for borers 1,736 with 35,825 trees: or a total of 5,385 orchards and 346,949 trees.

Much attention has been given to commercial orchards in helping their owners to properly care for them, and to cull, grade and pack fruit.

Animals

During the year there has been brought into the state for breeding purposes 2,034 horses, cattle, hogs, sheep and goats. Much has been done in feeding demonstrations, testing for milk production and general care of the animals. Agents, either directly or indirectly, have been responsible for the treatment of 50,823 animals for diseases and pests.

With poultry 539 demonstrations have been conducted with 50,237 fowls.

Silos and Fertilizers

Agents have influenced the building of 68 silos during the year. Good results have been obtained and many demontrations conducted with fertilizers, lime and manure.

Farm and Farmstead Improvement

A great variety and a great amount of work has been accomplished that might be classed under this head. We give a few items as follows:

Farm buildings painted and whitewashed	1,304
Water systems installed	243
Lighting systems installed	579
Saniary conditions improved	3,011
New pastures planted	1,180
Farms terraced	1,710
Home gardens planted, etc.	2,814

Miscellaneous

Only a few items will be mentioned here as follows:

Meetings addressed	5,407
Attendance at meeting	446,346
Visits to individual farmers	55,332
Personal calls on agents	524,151
Phone calls on agents	15,427
Official letters written	64,230
Bulletins mailed or given out	87,464
Circular letters mailed	270,620
Agricultural articles written	5,222

This makes a total of 1,467,117 services rendered. Of course this is not the total number of people reached because the articles have been carried in county and daily state papers, and some of them have even been published in magazines with large circulations. It is safe, therefore, to conclude that not less than 2,000,000 people have been influenced one way or another by the work.

AN EXAMPLE OF SUCCESSFUL WHITE COUNTY AGENT WORK

Ten years ago farm demonstration work was started in Wilkes county. At this time Wilkes was considered one of the backward counties of the state. Lying at the foothills of the mountains, it is very rugged and rough, with the exception of some small valleys along the rivers and the table lands. The Brushy Mountains in the western part of the county, broken and rugged, are the home of the famous Limber Twig apples, which, with a few seedlings, were all the apples grown in the county at the time.

During the winter farmers would haul their little apple crops to neighboring towns in their farm wagons and dispose of them for whatever was offered.

As soon as appointed the agent linked his efforts with those of the county superintendent of instruction. Club work especially was conducted through the teachers as local leaders.

At the beginning the county was buying hundreds of carloads of corn, hay and other supplies, but now it supplies itself with practically all such things used in the county.

At first few farmers knew about the value of good seed of clover and grasses. Now hundreds of farmers are not only using improved seed but improved methods of growing all kinds of crops. The agent has induced hundreds of them to use ground limestone on their lands. This, with an abundance of legumes and deep plowing and phosphoric acid, have made the worn, gullied fields, productive.

At one of the agent's school house meetings a little son of a tenant farmer joined the corn club and procured some purebred seed. His acre of corn attracted wide-spread attention among the neighbors. His exhibits won at the county fair. The success of the boy so enthused the father that he immediately bought a little farm and began to give his attention to it.

Through the aid of the county agent he became expert in selection of seed corn and show corn. He won, not only at county fairs, but at the State Fair, and at the National Corn Show at Columbia, S. C.

The man had several boys who, one after another as they became old enough, joined the corn clubs and other clubs. The father is now a substantial farmer, a respected citizen, and well liked by all the people who know him.

Another farmer in the county, past middle age, also took up the growing of corn by better methods and better seed. Since that time he has made for about ten years the largest yield per acre of any farmer in the county. His farm is now headquarters for good seed corn. He also grows very successfully large amounts of crimson clover, red clover, and grass.

Still another farmer, who lived on a very poor farm, saw that he could not make a success of growing corn unless he improved his land. He called on the agent who told him that deeper and better plowing, lime, phosphoric acid and legumes would turn the trick. He followed the agent's advice on a small plot of land at first, but has been extending the methods to his whole farm. He is so enthused about clover that he sells clover seed to his neighbors at cost through his little store. His farm is now in splendid condition and producing large and profitable crops.

Scores of other instances might be given of men who have demonstrated good farming under the agent's influence. This work, and that done by the county superintendent, has improved the entire citizenship to a remarkable degree. The boys who were taught in school and at the clubs during the last ten years are fast becoming leading farmers and teachers, whose influence will revolutionize the county.

The small orchardists of ten years ago have planted larger orchards of commercial varieties and have learned to spray and prune their trees and have formed a cooperative apple growers' association. They hire a salesman to dispose of their crops on the best markets and at the best prices.

The county is building better roads, better schools, building up its farms and filling up with industrious, progressive, law-abiding citizens. Other influences of course have had something to do with this remarkable change, but the two leading spirits are the county agent and the county superintendent of public instruction.

The following lines from one of their county papers shows the attitude of the people towards these two men:

They're planting lights along the way
All future feet must plod,
That prove to us their tiring walk
Is hand in hand with God.

That when they reach the river, at
The setting of the sun,
They'll meet the boatmen on the brink,
And hear his glad, "Well done."

That when they cross the silent sea,
To that eternal day,
They'll see the pearly gate swing wide,
Because they blazed the way.

SUCCESSFUL UNDERTAKINGS

Many of the county agents report valuable projects undertaken and accomplished during the year, some of which are not altogether in line with regular plans. Some of them are given below as follows:

Anson County

In the early spring the county agent put on a campaign for the planting of velvet beans for soil improvement and winter grazing by hogs and cows. This resulted in the planting of 3,000 bushels of velvet beans, or about 12,000 acres. He also promoted successfully the planting of 460 acres in commercial peach orchards, by way of greater diversification to meet boll weevil conditions.

Bladen County

In order to grow a better variety of cotton in the county, the agent procured 165 bushels of a highly improved strain of cotton, and induced 60 farmers to plant seed breeding patches. These farmers have taken good care of the seed in ginning and otherwise so that there is now for sale in the county over 2,500 bushels of improved, well-selected seed. Some of the seed planted yielded over 1,800 pounds of seed cotton per acre, or from 10 to 25 per cent more than ordinary varieties. A good piece of work with live stock was the placing of 20 purebred boars in the county for the purpose of breeding.

Cleveland County

The agent organized a Jersey Breeder's Association with 19 members. In the fall the association went out of the county and purchased cattle for a show and sale. This resulted in the buying of 11 head of purebred Jerseys by local people as a start in the good cattle business.

Durham County

One feature of the work in this county is the 15 active community clubs, well organized, and carrying out well made programs.

Lincoln County

An important part of the work here is the club work with a membership of 175. Every one, with about three exceptions, carried out his or her project. There were 100 in the poultry club, 40 in the corn club, 20 in the pig club, and 15 in the sorghum club.

Mecklenburg County

This county is fast becoming known as a Jersey cattle producing county. For three years the agent has promoted the growing and caring for this breed of dairy cows. The county has now a Jersey Breeder's Association with nine breeding blocks, a cow testing association, a retail milk dealers association, a milk producers association and is now considering the establishment of a creamery. All of these organizations are active and alert in promoting the dairy cow business in a proper way. During the "National Jersey Week," the retail milk producers associations had three attractive window displays in Charlotte. During five days of the week the association served free from a booth over 100 gallons of Jersey milk to the public.

At the second annual Jersey sale 39 head of Jersey cattle were consigned without reservation. Of these, 37 were sold to Mecklenburg farmers, 22 of whom were beginners in the breeding of purebred cattle.

Another interesting feature of the work was the holding of eight four-day farm schools, four in the winter, and the others in the summer. The programs were as follows:

For winter schools:

First day—Pruning, spraying and terracing.

Second day—Discussions of dairy work.

Third day—Proper use of fertilizers and lime.

Fourth day—Moving pictures and other entertainment features.

For summer schools:

First day—The organization of community fairs.

Second day—Care of dairy cows.

Third day—Preparation of grain for fall seeding and field selection of seed.

Fourth day—Poultry culling.

Each subject was handled by a specialist in that line, the specialist rotating from place to place on the different successive days. These schools were held out in the county at school houses in thickly settled communities where a large number of people could be easily reached.

Chowan County

A good piece of work here was the promotion of the growing of improved strains of cotton, corn and other crops. Sixty acres of corn and 300 acres of cotton were planted with varieties selected by the agent to show the value of good seed.

A unique project was conducted with wool. When the farmers were offered only 10 cents a pound for their wool the agent induced them to

ship it to manufacturers and have it made into blankets. After paying all costs of the operation, the farmers realized an average of about 40 cents a pound for the wool.

Edgecombe County

This county is becoming well and favorably known for the amount of improved cotton grown. Through its seed breeders association, in cooperation with the county agent and specialists, it has increased its yield per acre about 20 per cent, and increased the quality of its cotton to about the same extent. It has now 25,000 bushels of excellent seed for which there will be adequate demand in counties further south, which the boll weevil has invaded. This county in fact will be a desirable source for good seed on a large scale.

Hertford County

Here the good work of previous years in growing and selling only certified cotton seed has been continued by members of the seed growers association.

Avery County

The agent in this moutain county learned that Irish potatoes grown there were as good as cold storage seed from the north for early crop potatoes in the eastern counties of the state. With this information, and with a contract for seed potatoes from eastern growers, the agent organized an association, chartered under state laws, for the growing and selling of certified seed potatoes, and proceeded to carry out his project.

All field potatoes grown by the members of the association were inspected three times during the year by one expert, so all the potatoes sold through the organization were reliable. They now have a large amount of first

Cabarrus County

The agent here has five active community clubs that meet regularly once a month, and carry out well arranged programs, made in cooperation with the farm and the home demonstration agents. These programs consist of readings, music, and a variety of other things of interest to farm men and women.

Twice during the year an effort was made by opponents of demonstration work to have county appropriations and the work discontinued, but these clubs would not permit it to be done.

Richmond County

An important organization in this county is its community life association. This organization seeks to promote the socal and educational life of rural people. Later it expects to take up other valuable features, but expects to first succeed with those started. Another accomplishment of the present year was the holding of four very successful and creditable community fairs.

Washington County

One very valuable project in this county was the planting of 86 new pastures during the year. The agent procured the seed for these and assisted in planting every pasture. There were practically no pastures of much value in the county before this time.

Wayne County

A splendid piece of work was done here in the organization of the Mount Olive Truckers Cooperative Association by the county agent and Division of Markets with a membership of 170 farmers. It was hard sleighing at first because the movement was fought by local brokers and merchant buyers. The organization was held together resulting in the cooperative sale of about 200 cars of produce, mostly Irish potatoes.

Another important project is the getting of wilt resistant strains of cotton for farmers. There are probably 5,000 acres of such land in the county. The agent is working to get such strains as Dixie Triumph, and Dixie Wilt Resistance planted on every farm in the county.

Another worth while project is that of the work of its co-operative marketing association, which purchased 35 cars of fertilizer and lime, and sold 20 cars of improved cotton seed, both at a good profit.

Jones County

Here too, the agent has been very successful with pasture work. By virtue of a number of pasture demonstrations during previous years, he succeeded in getting over 100 planted this year.

Robeson County

Three years ago the county agent here, in anticipating the invasion of the boll weevil, started plans for a greater diversification of farm crops, with a reduction of cotton acreage and an increased yield per acre of all crops grown. He first got the plans put into operation on a 300 acre cotton farm as a big demonstration farm, after which he sought to get similar plans into operation on as many other farms as possible. The following facts tell the story of the success of his efforts in the matter:

The farm as it was three years ago: 300 acres in cotton; no permanent pastures; no legumes except cow peas; very little hay crops; livestock limited and of poor grade; scrub poultry; and everything in keeping with an all-cotton farm.

The farm today: contains 8 acres alfalfa for hay and grazing; 22 acres oats and vetch for hay; 22 acres mixed grasses and clovers for pastures; 20 acres wheat; 25 acres Abruzzi rye for seed; 3 acres rape for grazing; and a big acreage in oats.

Livestock on farm now: One registered boar and several registered sows; one registered Holstein bull, used on grade cows; the calves are kept on the farm; white leghorn and Rhode Island red poultry.

Crops to be planted next spring: 100 acres to cotton; 20 acres to corn, with velvet and soy beans in every row; 30 acres to soy beans, to be harvested with picker; 22 acres to lespedeza and carpet grass pasture; 20 acres to Irish potatoes; 6 acres to cabbage; and several acres to sugar cane.

Buildings under construction: A dairy barn and silo for 20 cows; a poultry house and runs for 500 hens; a 2500 bushel sweet potato storage house, and implement shed; a light plant already installed for supplying lights and water for these buildings.

Crops: An effort has been put forth during the past three years for more velvet beans and as a result the majority of the farms in the county grew velvet beans this year. The acreage will be much larger next year. Soy beans for grazing were also planted. Better seed of all classes have been insisted upon. Practically all the cotton is now grown from good seed.

Attention to good corn seed is also on the increase. The small grain is on the increase since better seed are being used. Peanuts were started in a small way this year. The acreage will be increased considerably. Two farmers have obligated to purchase thrashers for their communities. Sweet potato industry is on the increase. Two storage houses have been constructed. Several have plans and material for construction before another crop.

Pastures: A number of mixed grasses and clover pastures have been planted this fall. More than 100 lespedeza and carpet grass pastures are planned for next spring. A local bank has advanced money for the purchase of carpet grass seed.

Orchards: The orchard work was conducted principally through township demonstrations. A demonstration was held in each of the 25 townships. The attendance ranged from 6 to 35, twenty being about the average. These demonstrations proved so profitable that similar work will be done this winter. Some individual pruning was done. The totai number of trees pruned was 1067.

Livestock: A number of purebred hogs and cattle have been brought to the county this year. Farmers generally are beginning to see the need of more and better livestock. One farmer for instance recently purchased a carload of Angus cattle, a carload of Holstein cattle and a carload of hogs. He has built a 110 ton silo and has set aside 450 acres of his best cotton land for pastures. Half of this is in small grain, the other half in velvet beans that were grown in corn. Fifty acres of small grain land will be seeded to lespedeza and carpet grass next spring. Fifty acres more to mixed grasses and clovers next fall. Rotation crops will be grown on the remainder. Four up to date demonstration hog farms have been started. They are arranged with from eight to ten one-acre lots with a lane giving entrance to each. Each of these farms has from one to three acres of mixed grass and clover pasture. Each will sow a plot of lespedeza and carpet grass next spring. They all have registered hogs. One of my demonstrators paid for his 1920 cotton fertilizer with pigs sold since January 1st. He sold 67 at $17.50 to $20.00 each. He says he is going to plant his cotton fields in hogs. Also said if it had not been for his hogs, the fertilizer bill would still be unpaid.

Poultry: This line of work is looking good also. Yesterday I assisted two farmers in laying out poultry plants. Both will be under fence and one will cover three acres and the other six. A meeting to organize a poultry association in one of the best communities of the county is advertised for tomorrow. I have one cooperator who is selling $20 worth of poultry and $10 worth of dairy products per week. This is the living for the family. They say "No more cotton." Several people who have been shown how are now making money on poultry.

FARMER EXCURSIONS

By this is meant trips by groups of farmers, usually arranged by county agents, into neighboring counties or states for the purpose of observing and studying farming methods, livestock, dairies, crop varieties, good roads and other things of interest. These trips are usually therefore educational as well as social and serve as a nice little outing for those participating. The agents in Alamance, Anderson, Gaston and Iredell counties have conducted such excursion trips during the year. The agent in Cabarrus County conducted a company of over one hundred farmers to the farmers state convention in August.

Over one hundred farmers from Alamance made a trip to the mountains, and on the way visited the State Test Farm in Iredell County. They were royally entertained by the local people and spent about two days studying the experiments on the farm, and visiting points of interest in the county, such as dairy farms, hog farms, poultry farms, creameries and orchards. On this trip they passed through about twelve counties, finding many things of interest in each of them.

QUESTIONS ASKED

Under this head is given below a list of questions asked an agent during one week as a specimen showing how well informed county agents ought to be:

What must I do to prevent my potatoes bursting open?
What is the proper kind of feed for my dairy cow?
What is the trouble with my horses' eyes and what shall I do?
What will kill weevils in stored peas and corn?
How shall I treat a calf that has weak bowels?
How do you sow oats, vetch, and crimson clover?
Where can I get a purebred pig?
How can I prevent yellow side in my cabbage?
What will cure or prevent big root in collards?
How shall I begin to improve an old, worn-out farm?
How do you grow velvet beans?
Give me a recipe for curing meat.
What shall I give my hogs to rid them of worms?
Is it too late to sow rye?
Is it safe to put hogs in a field where hogs had cholera last year?
Shall I hold my cotton for 35 cents a pound?
How can I get worms out of my bee hives?
How can I prevent oat smut?
What is the best tractor to buy?
How much lime should I put to the acre?
Is it too late to sow clover?

WHAT A COUNTY AGENT DOES

If we could really get together a list of all the things county agents engage in we would find it to be a very long one. The list below, by one of the agents, shows again the importance of agents having practical experience in a large variety of things:

The county agent is a public officer employed by the U. S. Department of Agriculture, the N. C. College of Agriculture, and the State Department of Agriculture and county officials. One of the duties of the county agent is to bring to the farmers of the county, on their own farms, the results of scientific investigation in agriculture and the experience of successful farmers, and through demonstrations, to induce the local farmers to put these into practice. In his organization work, he assists in reorganizing and redirecting the agriculture of the community, and aids all economic and social forces working for the improvement of agriculture and of country life. He gives instruction not only in those subjects which are gener-

ally recognized under the head of agricultural practices, but also in farm management, marketing, and various other things. He works as far as possible with the existing organizations.

1.—Specifically, he promotes community cooperation.
2.—Conducts farmers meetings, short courses, and agricultural tours.
3.—Assists in the organization of breeders associations.
4.—Assists in county and community fairs.
5.—Assists in the construction and rearrangement of farm buildings.
6.—Assists in the organization of national farm loan associations.
7.—Assists in cooperative buying of fertilizer, lime, seed and farm machinery.
8.—Organizes and attends community meetings to advise, consider, and adjust community problems and build up a strong rural community.
9.—Assists in the marketing and the distribution of farm products.
10.—Aids in the installation of drainage systems.
11.—Aids in the control of hog cholera and other animal diseases.
12.—Introduces more and better livestock.
13.—Assists in the proper management of the farm business.
14.—Promotes improved methods of crop rotation.
15.—Advises about the home mixing of fertilizer.
16.—Advises farmers about the use of fertilizer, lime and manure.
17.—Has soil, fertilizer, lime and seed analyzed.
18.—Advises about the selection and storage of farm and garden seed.
19.—Assists in pruning, spraying and caring for fruit trees.
20.—Aids the home agent in her work.

SUMMARIES

County Organizations

1. Number of central organizations supporting the work	35
2. Number of community farmers' clubs assisted in organizing this year	239
3. Number of community farmers' clubs now in demonstration territory	879
Total Memberships	24,491
4. Number of local lodges of Granges, Farmers' Unions, etc., as community organizations supporting the work	514
Total Membership	16,225
5. Number of community farmers' clubs ceasing to exist during this year	25
6. Number of clubs organized so as to include the farmer's wife, children and others in their membership	222
7. Have these organizations been helpful to the farmer and his family? Yes.	
8. Number of community farmers' clubs dependent on the county agent for their existence and the continuation of their efforts	26
9. Number of clubs having a community plan or program of work	18
10. Number of county organizations having a definite plan of work with reference to the county	15
11. Number so thoroughly organized that someone in every community or school district assists in extension work and through whom every farm family can be reached	2

Co-operative Buying and Selling

		Amount Saved.
Amount bought	$411,483	$ 93,395
Amount sold	97,850	31,424
Total handled (bought and sold)	$509,333	$124,817

Corn

1. Number of demonstrators	1,020
2. Number of demonstrators reporting	727
3. Total acreage of corn grown under improved methods on demonstration farms	31,306
4. Average yield (bushels) per acre on demonstrations	39.9
Whites	44.2
Negroes	35.7
5. Estimated average yield (bushels) for entire state	20
6. Increased yield (bushels) on demonstrations over ordinary methods	20
7. Number of cooperators	5,860
8. Total acreage of corn grown under improved methods by cooperators	55,122
9. Average yield (bushels) per acre on demonstrations by cooperators	29
10. Number of farmers testing seed corn for germination	388
11. Number of bushels so tested for germination	670
12. Number of farmers planting pure or selected seed on their demonstrations	1,024
13. Acreage planted with pure or selected seed	8,719
14. Number of farmers influenced to select seed for next year's crop	4,441
15. Estimated amount of seed selected (bushels)	9,827
16. Number who fall-plowed their demonstration acres	830
17. Number who turned under cover crops on their demonstration acres	1,108
18. Number of acres harvested for silage	660
19. Yield per acre harvested for silage (tons)	10
20. Number of acres "hogged down"	1,373
21. Estimated value per acre when utilized this way	$35.64
22. Number of acres treated for diseases or insect pests	62
23. Number of farmers directly influenced to use better methods in growing corn this year	6,245
24. Estimate of how many were indirectly influenced	17,358

Cotton

1. Number of demonstrators	715
2. Number of demonstrators reporting	326
3. Total acreage grown under improved methods on demonstration farms	7,855
4. Average yield per acre on demonstration farms (lbs. seed cotton)	1,338
5. Estimated average yield for entire state	691
6. Increased yield per acre on demonstrations over ordinary methods (lbs. seed cotton)	647
7. Number of cooperators	3,871
8. Total acreage grown under improved methods by cooperators	12,691

9. Average yield per acre by cooperators (lbs. seed cotton)	1,038
10. Number of farmers testing cotton seed for germination	60
11. Number of bushels so tested	816
12. Number of demonstrators who planted pure selected seed	784
13. Acreage planted with pure or selected seed	18,179
14. Number of farmers induced to field select seed for next year's crop	2,492
15. Number who fall-plowed their demonstration acres	213
16. Number who turned under cover crops on their demonstration acres	469
17. Number of acres treated for diseases or insect pests	30
18. Number of communities growing one variety of cotton	12
19. Number of farmers directly influenced to use better methods in cotton growing this year	2,565
20. Estimated number who were indirectly influenced	8,425

Tobacco

1. Number of demonstrators	256
2. Number of demonstrators reporting	91
3. Total acreage in demonstrations	688
4. Average yield per acre (lbs.)	886
5. Estimated average yield for entire state	616
6. Increased yield per acre of demonstrations over ordinary methods (lbs.)	270
7. Number of farmers induced to plant pure or selected seed	636
8. Acreage planted with pure or selected seed	2,726
9. Number of farmers treating tobacco seed for disease	216
10. Number of acres this treated seed planted	238
11. Number of farmers directly influenced to use better methods in growing tobacco this year	1,550
12. Estimated number who were indirectly influenced	2,078

Tomatoes

1. Number of demonstrators	40
2. Number of demonstrators reporting	34
3. Total acreage in demonstrations	45
4. Average yield per acre (bushels)	229
5. Estimated average yield per acre for entire state (bushels)	125
6. Increased yield per acre of demonstrations over ordinary methods (bushels)	104
7. Number of farmers induced to plant pure or selected seed	149
8. Number of farmers induced to field select seed for next year's crop	29
9. Acreage planted with pure or selected seed	27
10. Number who fall-plowed their demonstration acres	44
11. Number who turned under cover crops on their demonstration acres	42
12. Number of farmers influenced to adopt a rotation system	43
13. Number of acres treated for insect pests	75
14. Estimated increased value per acre resulting from treatment	$ 32.50
15. Number of acres treated for diseases	47
16. Estimated increased value per acre resulting from treatment	$ 15.37
17. Number of demonstrators who grew their own plants	24
18. Number of farmers induced to construct hot beds	101

19. Number of farmers directly influenced to use better methods in growing tomatoes this year	216
20. Estimated number who were indirectly influenced	670

Wheat

1. Number of demonstrators	408
2. Number of demonstrators reporting	262
3. Total acreage grown under improved methods on demonstration farms	2,528
4. Average yield per acre on demonstrations (bushels)	16
5. Estimated average yield per acre for entire state (bushels)	10
6. Increased yield per acre on demonstrations over ordinary methods (bushels)	6
7. Number of cooperators	1,235
8. Total acreage grown under improved methods by cooperators	7,658
9. Average yield per acre by cooperators (bushels)	12.5
10. Number of farmers testing seed for germination	146
11. Number of bushels so tested	860
12. Number of demonstration acres threshed for grain	1,523
13. Acreages planted with pure or selected seed	4,325
14. No report on number of demonstration acres cut for hay	
15. No report on average yield cured hay per acre	
16. No report on increase per acre of cured hay over ordinary methods	
17. Number of acres grazed off	200
18. Estimate value per acre of grazing	$15
19. No report on number of acres turned under for soil improvement	
20. Number of bushels of seed treated for smut, rust, etc.	4,893
21. Number of farmers directly influenced to use better methods in growing this crop this year	2,286
22. Estimated number who were indirectly influenced	3,229

Rye

1. Number of demonstrators	638
2. Number of demonstrators reporting	406
3. Total acreage grown under improved methods on demonstration farms	3,048
4. Average yield per acre on demonstrations (bushels)	10
5. Estimated average yield per acre for entire state (bushels)	5.5
6. Increased yield per acre on demonstrations over ordinary methods (bushels)	4.5
7. Number of cooperators	990
8. Total acreage grown under improved methods by cooperators	2,976
9. Average yield per acre by cooperators (bushels)	6.8
10. Number of farmers testing seed for germination	310
11. Number of bushels so tested	1,192
12. Number of demonstration acres threshed for grain	441
13. Acreage planted with pure or selected seed	1,303
14. Number of demonstration acres cut for hay	456
15. Average yield of cured hay per acre on demonstration (tons)	1.6
16. Increase per acre of cured hay on demonstrations over ordinary methods (tons)	.62
17. Estimated value per acre of grazing	$18.00

18. Number of acres turned under for soil improvement..... 2,079
19. Number of bushels of seed treated for smut, rust, etc..... 193
20. Number of farmers directly influenced to use better methods.. 1,212
21. Estimated number who were indirectly influenced..... 1,665

Oats

1. Number of demonstrators..... 416
2. Number of demonstrators reporting..... 329
3. Total acreage grown under improved methods on demonstration farms 2,956
4. Average yield per acre on demonstrations (bushels)..... 28.5
5. Estimated average yield per acre for entire state (bushels).. 19
6. Increased yield per acre on demonstrations over ordinary methods (bushels) 9.5
7. Number of cooperators..... 525
8. Total acreage grown under improved methods by cooperators. 1,647
9. Average yield per acre by cooperators (bushels)..... 22
10. Number of farmers testing seed for germination..... 193
11. Number of bushels so tested..... 746
12. Number of demonstration acres threshed for grain..... 951
13. Acreage planted with pure or selected seed..... 1,921
14. Number of demonstration acres cut for hay..... 372
15. Average yield of cured hay per acre on demonstrations (tons) 3.5
16. Increase per acre of cured hay on demonstrations over ordinary methods (tons)..... 1
17. Number of acres grazed off..... 1,633
18. Estimated value per acre of grazing.....$26.03
19. Number of acres turned under for soil improvement..... 116
20. Bushels of seed treated for smut, rust, etc..... 2,606
21. Number of farmers directly influenced to use better methods in growing this crop this year..... 2,024
22. Estimated number indirectly influenced..... 2,557

Alfalfa

1. Numbers of demonstrators..... 330
2. Number of demonstrators reporting..... 204
3. Total acreage in this crop grown under improved methods on demonstrations 711
4. Average yield per acre on demonstrations (tons of cured hay). 2.8
5. Estimated average yield per acre for entire state (tons of cured hay) 2.5
6. Number of acres cut for hay..... 599
7. Increased yield per acre of demonstrations over ordinary methods (tons cured hay)..... 0.3
8. Number of acres grazed off..... 84
9. Estimated value per acre of grazing.....$50.20
10. Number of cooperators..... 205
11. Total acreage grown under improved methods by cooperators.. 147
12. Average yield per acre by cooperators (tons of cured hay).... 2.9
13. Number of acres inoculated..... 621
14. Number of farmers who ordered inoculating material through agents from U. S. Department of Agriculture..... 417

15. Number of demonstration acres turned under for soil improvement 28
16. Estimated total number of acres in state turned under by agents advice 75
17. Number of acres sown this fall..... 301
18. Number of farmers influenced to use better methods in growgrowing this crop this year..... 248
19. Estimated number indirectly influenced..... 120

Crimson Clover and Bur Clover

1. Number of demonstrators..... 423
2. Number of demonstrators reporting..... 245
3. Total acreage in this crop grown under improved methods on denominations 2,038
4. Average yield per acre on demonstrations (tons of cured hay) 2
5. Estimated average yield per acre for entire state (tons of hay) 1
6. Number of acres cut for hay..... 716
7. Increased yield per acre of demonstrations over ordinary methods (tons cured hay) 5
8. Number of acres grazed off..... 441
9. Estimated value per acre of grazing.....$ 28.57
10. Number of cooperators..... 411
11. Total acreage grown under improved methods by cooperators 2,754
12. Average yield per acre by cooperators (tons of cured hay).. 1.7
13. Number of acres inoculated..... 1,502
14. Number of farmers who ordered inoculating material through agents from U. S. Department of Agriculture..... 369
15. Number of demonstration acres turned under for soil improvement 881
16. Estimate total number of acres in state turned under by agents' advice 4,779
17. Number of acres sown this fall..... 18,468
18. Number of farmers directly influenced to use better methods in growing this crop this year..... 1,724
19. Estimated number indirectly influenced..... 1,966

Mixed Grasses and Clover

1. Number of demonstrators..... 1,019
2. Number of demonstrators reporting..... 450
3. Total acreage in this crop grown under improved methods on demonstrations 4,187
4. Average yield per acre on demonstrations (tons of cured hay) 2.6
5. Estimated average yield per acre for entire state (tons of cured hay) 2.4
6. Number of acres cut for hay..... 2,590
7. Increased yield per acre of demonstrations over ordinary methods (tons of cured hay) 0.2
8. Number of acres grazed off..... 851
9. Estimated value per acre of grazing.....$ 40.50
10. Number of cooperators..... 1,381
11. Total acreage grown under improved methods by cooperators. 5,539

12. Average yield per acre by cooperators (tons of cured hay)..	2
13. Number of acres inoculated.....	1,529
14. Number of farmers who ordered inoculating material through agents from U. S. Department of Agriculture.....	767
15. Number of demonstration acres turned under for soil improvement	746
16. Estimate total number of acres turned under by agents' advice	5,368
17. Number of acres sown this fall.....	12,963
18. Number of farmers influenced to use better methods in growing this crop this year.....	2.438
19. Estimated number indirectly influenced.....	3,346

Oats and Vetch Demonstrations

1. Number of demonstrators.....	400
2. Number of demonstrators reporting.....	181
3. Total acreage in this crop grown under improved methods on demonstrations	1,864
4. Average yield per acre on demonstrations (tons cured hay)..	2
5. Estimated average yield per acre for entire state (tons cured hay)	1.5
6. Number of acres cut for hay.....	1,289
7. Increased yield per acre of demonstrations over ordinary methods (tons cured hay)	.5
8. Number of acres grazed off.....	367
9. Estimate value per acre of grazing.....	16.42
10. Number of cooperators.....	223
11. Total acreage grown under improved methods by cooperators	813
12. Average yield per acre by cooperators (tons cured hay)....	1.5
13. Number of acres inoculated.....	1,098
14. Number of farmers who ordered inoculating material through Agents from U. S. Department of Agriculture.....	271
15. Number of demonstration acres turned under for soil improvement	208
16. Estimated total number of acres in state turned under by agents' advice	1,224
17. Number of acres sown this fall.....	3,864
18. Number of farmers directly influenced to use better methods in growing this crop this year.....	866
19. Number of farmers indirectly influenced.....	942

Cowpeas

1. Number of demonstrators.....	478
2. Number of demonstrators reporting.....	380
3. Total acreage of this crop grown under improved methods on demonstrations	2,973
4. Average yield per acre on demonstrations (bushels of seed)	10
5. Average yield per acre on demonstrations (tons cured hay)	1.5
6. Estimated average yield per acre for entire state (bushels of seed)	7.5
7. Estimated average yield per acre for entire state (tons cured hay)	1
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	2.6

9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	.5
10. Number of cooperators	2,132
11. Total acreage grown under improved methods by cooperators	9,043
12. Average yield per acre by cooperators (bushels of seed)	8
13. Average yield per acre by cooperators (tons cured hay)	1
14. Number of farmers testing seed for germination	5
15. Total number of bushels seed so tested	23
16. Acreage planted with pure or selected seed	1,083
17. Total acreage of demonstrators and cooperators threshed for seed	1,237
18. Total acreage of demonstrators and cooperators cut for hay	4,634
19. Number of acres grazed off	536
20. Estimated value per acre of grazing	$ 22.30
21. Total number of acres turned under for soil improvement	1,200
22. Total number of acres inoculated by department cultures	11
23. No report on total number of acres inoculated by soil	
24. Total number of acres inoculated by commercial cultures	41
25. Give estimate of acres planted this year to this crop due to agents' influence	13,781
26. Number of farmers directly influenced to use better methods in growing this crop this year	1,012
27. Estimated number indirectly influenced	2,811

Soy Beans

1. Number of demonstrators	777
2. Number of demonstrators reporting	506
3. Total acreage of this crop grown under improved methods on demonstrations	4,950
4. Average yield per acre on demonstrations (bushels of seed)	10.8
5. Average yield per acre on demonstrations (tons cured hay)	3.6
6. Estimated average yield per acre for entire state (bus. of seed)	9
7. Estimated average yield per acre for entire state (tons cured hay)	2.7
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	1.6
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1
10. Number of cooperators	3,069
11. Total acreage grown under improved methods by cooperators	12,381
12. Average yield per acre by cooperators (bushels of seed)	9
13. Average yield per acre by cooperators (tons cured hay)	3
14. Number of farmers testing seed for germination	19
15. Total number of bushels seed so tested	2,185
16. Acreage planted with pure or selected seed	5,214
17. Total acreage of demonstrators and cooperators threshed for seed	3,256
18. Total acreage of demonstrators and cooperators cut for hay	3,789
19. Number of acres grazed off	7,443
20. Estimated value per acre of grazing	$ 60.50
21. Total number of acres turned under for soil improvement	2,843
22. Total number of acres inoculated by department cultures	232

23. Total number of acres inoculated by inoculated soil	163
24. Total number of acres inoculated by commercial cultures	456
25. Estimated number of acres planted of this crop this year due to agents' influence	15,082
26. Number of farmers directly influenced to use better methods in growing this crop this year	1,616
27. Estimated number indirectly influenced	2,599

Velvet Beans

1. Number of demonstrators	366
2. Number of demonstrators reporting	131
3. Total acreage of this crop grown under improved methods on demonstrations	5,311
4. Average yield per acre on demonstrations (bushels of seed)	22
5. Average yield per acre on demonstrations (tons cured hay)	3.7
6. Estimated average yield per acre for entire state (bushels of seed)	9
7. Estimated average yield per acre for entire state (tons cured hay)	2
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	13
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1.7
10. Number of cooperators	193
11. Total acreage grown under improved methods by cooperators	1,000
12. Average yield per acre by cooperators (bushels of seed)	9
13. Average yield per acre by cooperators (tons cured hay)	2
14. Number of farmers testing seed for germination	1
15. Total number of bushels seed so tested	1
16. Acreage planted with pure or selected seed	425
17. Total acreage of demonstrators and cooperators threshed for seed	10
18. Total acreage of demonstrators and cooperators cut for hay	1,571
19. Number of acres grazed off	3,117
20. Estimated value per acre of grazing	$ 67.00
21. Total number of acres turned under for soil improvement	1,613
22. Total number of acres inoculated by department cultures	4
23. Total number of acres inoculated by inoculated soil	2
24. Total number of acres inoculated by commercial cultures	5
25. Estimated number of acres planted this year to this crop due to agents' influence	11,645
26. Number of farmers directly influenced to use better methods in growing this crop this year	409
27. Estimated number who were indirectly influenced	2,150

Peanuts

1. Number of demonstrators	140
2. Number of demonstrators reporting	92
3. Total acreage of this crop grown under improved methods on demonstrations	446
4. Average yield per acre on demonstrations (bushels of seed)	67
5. Average yield per acre on demonstrations (tons cured hay)	2.1
6. Estimated average yield per acre for entire state (bushels of seed)	40.2

7. Estimated average yield per acre for entire state (tons cured hay)	2.0
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	26.8
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0.1
10. Number of cooperators	285
11. Total acreage grown under improved methods by cooperators	1,482
12. Average yield per acre by cooperators (bushels of seed)	53.7
13. Average yield per acre by cooperators (tons cured hay)	2.0
14. Number of farmers testing seed for germination (no report)	
15. No report on number bushels of seed so selected	
16. Acreage planted with pure or selected seed	419
17. Total acreage of demonstrators and cooperators threshed for seed	1,474
18. Total acreage of demonstrators and cooperators cut for hay.	402
19. Number of acres grazed off	147
20. Estimated value per acre of grazing	$ 11.25
21. Total number of acres turned under for soil improvement	5
22. No report on total number acres inoculated by department cultures	
23. No report on total number acres inoculated by soil	
24. Total number of acres inoculated by commercial cultures	6
25. Estimates number of acres planted this year to this crop due to agents' influence	1,130
26. Number of farmers directly influenced to use better methods in growing this crop this year	257
27. Number of farmers indirectly influenced	90

Irish Potatoes

1. Number of demonstrators	164
2. Number of demonstrators reporting	129
3. Total acreage of potato demonstrations	364
4. Average yield per acre on demonstrations (bushels)	101
5. Estimated average yield per acre for entire state (bushels)	80.5
6. Estimated number of acres planted with treated seed	983
7. Estimated number of acres on which foliage was treated for diseases and insect pests	4,046
8. Number of farmers who used certified seed through agents' influence	268
9. Total acreage planted with certified seed	798
10. Number of farmers directly influenced to use better methods in growing this crop this year	662
11. Estimated number indirectly influenced	1,618

Sweet Potatoes

1. Number of demonstrators	277
2. Number of demonstrators reporting	189
3. Total acreage of potato demonstrations	578
4. Average yield per acre on demonstrations (bushels)	137
5. Estimated average yield per acre for entire state (bushels)	97
6. Estimated number of acres planted with treated seed	696
7. Estimated number of acres on which foliage was treated for diseases and insect pests	30

8. Estimated increased acreage this year over last year due to county agents' work	1,562
9. Number of storage houses built this year	56
10. Total capacity of these storage houses (number of bushels)	69,505
11. Number of storage houses in the state	184
12. Total capacity of these storage houses (bushels)	157,250
13. Total number of bushels put in storage this year	87,280
14. Number of farmers directly influenced to use better methods in growing this crop this year	6,259
15. Estimated number indirectly influenced	882

Orchards

1. Number of demonstration home orchards	572
Apple	230
Peach	203
Other	169
2. Total number of trees in these demonstrations	39,324

	Orchards.	*Trees.*
3. Orchards inspected by agents	1,874	13,578
4. Orchards pruned due to agents' influence	2,463	174,733
5. Orchards sprayed due to agents' influence	979	79,654
6. Peach orchards treated for borers due to agents' influence	1,736	35,825
7. Orchards planted due to agents' influence	207	56,737
Total	7,259	360,527
8. Number of commercial orchards in the state—Apple	381	248,739
9. Number of commercial orchards in the state—Peach	257	406,413
10. Number of commercial orchards in the state—Other	38	24,298

11. Number of commercial orchards agents have assisted in caring for	345
12. Number of trees actually sprayed by agents	10,817
13. Number of trees actually pruned by agents	20,789
14. Number of trees actually wormed by agents	3,078
15. Estimated value of increased production due to demonstration methods	$ 28,963

Horses

1. Number of purebred stallions brought into the state this year due to agents' influence	1
2. Number of purebred jacks brought in due to agents' influence.	0
3. No report on how many brood mares brought in	
4. Number of demonstrations in feeding horses or mules	13
5. Number of horses or mules in the demonstrations	108
6. Number of horses or mules fed and cared for according to methods agents advocated	1,775
7. Number of purebred stallions in territory now	34
8. Number of purebred jacks in territory now	47

Dairy Cattle

1. Number of head of purebred bulls brought into the state this year through agents' influence	96
2. Number of head of purebred cows or heifers brought into the state this year through agents' influence	251
3. Number of head of purebred dairy cattle agents assisted farmers in selling this year through individual sales	321
4. Number of head of purebred dairy cattle agents assisted farmers in selling this year through group sales	138
5. Number of grade dairy cows have been brought into the state for breeding purposes this year through agents' influence	198
6. Number of cows have been tested at agents' instance to determine the profitable milk producers	861
7. Number of agents carrying a Babcock tester	12
8. Number of farmers induced to feed a better balanced ration to their stock	1,447
9. Number of head of stock so fed	5,734
10. Number of demonstrations in dairy work supervised	63
11. Number of cows in these demonstrations	83
12. Number of new cream stations established this year due to agents' influence	1
13. Number of cream stations in the state	14
14. Number of new cream routes established this year due to agents' influence or the county agent's work	24
15. Number of cheese factories in demonstration territory	4
16. Number of cheese factories established in demonstration territory this year	0
17. Number of purebred dairy bulls in the demonstration territory	763
18. Number of purebred dairy cows in demonstration territory now	7,194
19. Number of cow testing associations estabished this year due to agents' influence	1
20. Number of dairy breeders' associations established this year due to agents' influence	2
21. Number of dairy bull associations established this year	6
22. Number of members in these associations	167
23. Number of bulls in these associations	25
24. Total number of cows kept by members of these associations	551
25. Total number of bull associations now in operation in demonstration territory	38

Beef Cattle

1. Number of head of purebred bulls have been brought in this year through agents' influence	29
2. Number of head of purebred cows or heifers have been brought in this year through agents' influence	75
3. Number of head of purebred beef cattle agents assisted farmers in selling this year through individual sales	41
4. Number of head of purebred beef cattle agents assisted farmers in selling this year through group sales	39
5. Number of head of grade cows brought in this year for breeding purposes, through agents' influence	35
6. Number of beef breeding herds started this year due to agents' influence	34

7. Number of head of feeding cattle have been brought in this year through agents' influence	80
8. Number of beef feeding demonstrations agents supervised	3
9. Number of cattle in these feeding demonstrations	250
10. Number of these demonstratons on which records were kept	0
11. Estimated number of beef cattle cared for according to methods which agents advocated, where methods were wholly followed	271
12. Estimated number of beef cattle cared for according to methods which agents advocated, where methods were partially followed	675
13. Number of purebred beef bulls in the state now	431
14. Number of purebred beef cows in the state now	2,403

Dipping Vats

1. Number of dipping vats have been built through agents' influence this year	2
2. Number agents have helped to construct	2
3. Number agents have helped to fill with the solution	15
4. Total number in the state at this time	875
5. Estimated total number of cattle dipped during the year	168,649

Hogs

1. Number of head of purebred boars brought in this year due to agents' influence	372
2. Number of head of purebred sows or gilts have been brought in this year due to agents' influence	732
3. Number of head of purebred hogs agents assisted farmers in selling this year through individual sales	1,269
4. Number of head of purebred hogs agents assisted farmers in selling this year through group sales	136
5. Number of herds of purebred hogs started through agents' influence	415
6. Number of hog feeding demonstrations agents supervised	97
7. Number of hogs in these demonstrations	1,075
8. Number of these demonstrations on which records were kept	83
9. Number of self-feeders built at agents' suggestion	61
10. Number of farmers induced to start the growing of grazing crops for hogs	3,468
11. Estimated number of hogs fed or cared for according to methods which agents' advocated	24,505
12. Number of purebred boars in demonstration territory	8,451

Sheep and Goats

1. Number of head of purebred rams brought in this year through agents' influence	46
2. Number of head of purebred ewes brought in this year through agents' influence	107
3. Number of head of purebred sheep and goats agents assisted farmers in selling this year through individual sales	96
4. Number of head of purebred sheep and goats agents assisted farmers in selling this year through group sales	211
5. Number of grade ewes brought into the state this year for breeding purposes due to agents' influence	92

6. Number of flocks started 28
7. Number of sheep feeding demonstrations agents supervised... 5
8. Number of sheep in these demonstrations 71
9. Number of these demonstrations on which records were kept. 2
10. Number of farmers induced to grow grazing crops for sheep.. 75
11. Estimated number of sheep fed or cared for according to methods which agents advocated 1,470
12. Number of purebred rams in the state now 585
13. Number of purebred ewes in the state now 916

Poultry

1. Number of poultry demonstrations 539
2. Number of each kind of poultry grown and cared for according to methods which agents advocated:
   - Chickens 40,879
   - Ducks 49
   - Guineas 2,030
   - Turkeys 6,617
   - Geese 662
   - Total 50,237
3. Number of farms on which poultry management has been improved as a result of agents' work 6,407
4. Number of birds on these farms 96,364
5. Number of communities which have adopted a standard variety of poultry 391
6. Number of cream routes on which poultry products are collected 24
7. Number of flocks culled through agents' efforts 460
8. Number of birds in flocks culled 15,586
9. Number of birds eliminated through culling 12,758
10. Number of farmers induced to raise standard bred poultry this year 1,512
11. Number of demonstrators induced to practice early hatching. 907
12. Number of winter feeding demonstrations 212
13. Number of birds in the demonstrations 7,362
14. Number of new poultry houses erected at agents' suggestion. 201
15. Number of poultry houses remodeled at agents' suggestion.. 173

Live Stock Diseases and Pests

1. Number of demonstrations conducted through agents' influence in treating or testing livestock for the control of the following:

	Demonstrations.	*Animals treated.*
Cattle:		
Blackleg	82	1,291
Anthrax or charbon	0	0
Digestive and other troubles	175	649
Tuberculosis	236	2,619
Ticks	149	1,937
Lice	98	1,492

Hogs:			
	Cholera (single treatment)....	157	3,420
	Cholera (simultaneous treatment)	1,660	4,675
	Digestive and other troubles....	145	5,273
	Worms	364	6,039
	Lice	550	19,733
	Mange	85	3,013
Sheep:			
	Stomach worms	74	338
	Digestive and other troubles....	33	32
	Grubs	1	1
	Scab	5	108
	Ticks	6	78
Horses:			
	Spinal meningitis	1	3
	Anthrax or charbon	0	0
	Digestive ailments	38	45
	Distemper	0	0
	Accidents	22	38
	Other troubles	16	39

2. Agents actually gave the following number of demonstrations with the number of animals as indicated:

	Demonstrations.	*Animals treated.*
Cattle, for Blackleg.....	82	926
Cattle, for Tuberculosis.....	0	0
Cattle, for Anthrax or charbon.....	3	8
Hogs, for Cholera.....	200	36,740
Horses, for Anthrax or charbon.....	0	0

3. Number having instruments for such demonstrations..... 35

Fertilizers

1. Number of farmers agents have advised regarding the proper use of fertilizers..... 22,052
2. Number of fertilizer demonstrations the farmers are conducting with agents..... 609
3. Total acreage in these demonstrations..... 2,307
4. Amount of fertilizer used on such demonstrations (tons)... 1,354
5. Number of communities influenced to buy fertilizers cooperatively 210
6. Quantity bought cooperatively (tons)..... 17,257
7. Value of fertilizer bought cooperatively (actual price paid by cooperative purchase).....$206,445
8. Total amount saved by cooperative purchases..... $8,095
9. Number of farmers home-mixing fertilizer on agents' advice. 3,174
10. Estimated number of tons home-mixed..... 13,401
11. Estimated saving to farmers (per ton)..... $7.61

Manure

1. Number of farmers induced to take better care of manure... 4,942
2. Number of manure sheds built at agents' suggestion..... 451
3. Number of farmers composting farm manure and waste products 3,462

4. Number of manure spreaders bought this year through agents' influence	108
5. Number of farmers using phosphate or other material for reinforcing farm manure	13,984

Silos

1. Number of silos built in the state this year	68
2. Number of silos built this year as a result of agents' advice	46
3. Number of silos in the state	570
4. Of the number of silos in the state now there are:	
Tile	96
Cement	140
Stave	249
Stone	5
Pit	73
Other	7
Total	570

Lime

1. Number of demonstrators	1,226
2. Number of demonstrators reporting	471
3. Total number of acres in lime demonstrations	6,387
4. Number of farmers, other than demonstrators, used lime this year due to agents' influence	4,547
5. Quantity of burned lime used (tons)	908
6. Quantity of limestone or its equivalent used (tons)	25,846
7. Total number of acres treated this year	12,521
8. Number of local sources of lime developed	60
9. Number of lime crushers installed as a result of agents' work	1
10. Number of lime kilns built as a result of agents' work	9
11. Number of lime sheds constructed as a result of agents' work	14
12. Number of carloads shipped into the state	868
13. Number of farms on which soil was tested for acidity	1,201

Farm and Farmstead Improvements

(Things done with agents' assistance and advice.)

	Dwelling.	*Other.*
1. Number of buildings erected	207	267
2. Number of farm buildings improved	1,067	270
3. Number of new building plans furnished	63	170
4. Number of farm buildings painted or white-washed	1,304	196
5. Number of home water systems installed or improved this year		243
6. Total number of such systems in the state now		2,387
7. Number of home lighting systems installed in the state this year		579
8. Total number of such systems in the state now		4,155
9. Number of windmills erected this year		21
10. Number of home grounds improved		761
11. Number of farm and home sanitary conditions improved		3,011
12. Number of homes screened against flies and mosquitoes		9,140

13. Number of sanitary privies erected	2,312
14. Number of septic tanks installed	134
15. Number of telephone systems installed	13
16. Number of farmers furnished plans and induced to adopt systematic crop rotations	2,102
17. Total acreage of such rotations	66,681
18. Number of new pastures established	1,180
19. Total acreage of new pastures established	6,144
20. Number of old pastures renovated	337
21. Total acreage of old pastures renovated	2,961
22. Number of drainage systems established in the state	122
23. Number of farmers induced to drain all or part of their farms	601
24. Number of such acres drained by tile	1,003
25. Number of such acres drained by ditch	9.308
26. Number of farmers induced to remove stumps	442
27. Number of acres from which stumps were removed	1,902
28. Number of farmers induced to terrace their sloping lands	1,710
29. Total acreage so terraced	19,738
30. Number of home gardens planted or improved	2,814
31. Number of road improving demonstrations assisted in	434
32. Number of miles of improved roads resulting therefrom	397
33. Number of farmers who planted cover crops to be turned under	14,238

34. Number of new implements and tools bought:

Binders	26	1-Horse cultivators	376
Hay presses	33	Plows	1,120
Gas engines	123	Hay loaders	7
2-Horse cultivators	234	Farm levels	25
Tractors	147	Grading machines	35
Motor trucks	209	Hay rakes	90
Corn planters	376	Ensilage cutters	44
Ditching machines	16	Cream separators	58
Mowers	161	Spraying machines	245
Grain drills	137	Manure spreaders	41
Disk harrows	196	Small tools	7,024

Miscellaneous Extension Work

1. Number of visits by agents to:	
Demonstrators	19,580
Cooperators	14,350
Other farmers	21,602
Business men	5,078
Boys' and girls' club members	6,240
Total	66,850
2. Number of miles traveled:	
Railroad	129,144
Team	15,458
Automobile	448,720
Otherwise	3,102
Total	596,424
3. Calls on agents at office and home relative to work, personal	524,151
4. Calls on agents at office and home relative to work, telephone	15,427
5. Number of farmers' meetings held under auspices of agents or extension division	5,621

6. Number of meetings of all kinds addressed, including field meetings	5,407
7. Total attendance at these meetings (approximate)	446,346
8. Number of field meetings held by agents	1,103
9. Total attendance at these meetings	27,328
10. Per cent of time spent at office work	26
How divided:	
Correspondence	50
Conference	35
Miscellaneous	15
11. Per cent of time spent in field work	74
How divided:	
Supervising regular demonstrations	65
Other farm visits at meetings	15
Assisted in short course work	10
Organization	2
Marketing	8
12. Number of official letters written	64,230
13. Number of articles relating to the work prepared for publication	5,222
14. Number of different circular letters prepared by agents and sent out	5,857
15. Total number of copies of such letters	270,620
16. Number of bulletins or circulars of U. S. Dept. of Agriculture distributed	56,983
17. Number of bulletins or circulars from state college or state department of agriculture distributed	30,481
18. Number of visits to schools relating to work	2,326
19. Number of schools assisted in outlining an agricultural course	161
20. Number of extension schools or short courses assisted in	131
21. Total attendance at these schools	5,911
22. Total number of days engaged in these schools	206
23. Number of farmers who attended short courses at colleges as a result of agents' influence	780
24. Number of club boys who entered college for first time this year	171
25. Number of visits by specialists from college or the Department	855
26. Number of county fairs held in state this year	38
27. Number demonstrators, cooperators and club members having exhibits	2,753
28. Number of these who won prizes	2,020
29. Number of demonstrations in truck or small fruit	127
30. Number successful from a financial standpoint	107
31. Number of farm account books distributed to farmers	1,083
32. Number of farmers keeping complete cost records at agents' instance	173
33. Number of farmers keeping partial cost records at agents' instance	1,365
34. Number of farmers practicing fall plowing as a result of county agents' work	13,377
35. Number of wood lots improved at agents' suggestion	188
36. Number of farmers influenced to grow sugar cane or sorghum for syrup	4,222

37. Number of farmers who began keeping bees this year at agents' suggestion	122
38. Number of hives involved in these demonstrations	782
39. Number of farmers induced to transfer from old to improved hives	123
40. Number of hives involved in these transfers	549
41. Number of new queens introduced	189
42. Number of honey extractors purchased	0

Special Report by White Agents on Work with Negro Farmers

1. Number of negro demonstrators (all crops)	34
2. Number of negro demonstrators reporting (all crops)	5
3. Total acreage of all crops grown under improved methods on negro demonstration farms	405
4. Number of negro cooperators (all crops)	89
5. Total acreage of all crops of negro cooperators	1,432
6. Number of negro farmers who planted pure or selected seed on their demonstrations	17
7. Number of negro farmers agents have influenced to select seed for next year's crop	35
8. Estimated quantity of all seed selected by negro farmers (bushels)	67
9. Number of negro farmers who fall-plowed their demonstration acres	3
10. Approximate number of negro farmers who are following demonstration methods on their farms	199
11. Number of purebred animals bought by negro farmers at agents' suggestion:	
Horses, no report on	
Beef cattle, no report on	
Sheep and goats, no report on	
Dairy cattle, no report on	
Hogs	16
Poultry	32
12. Number of negro farmers who have produced practically all their home food and feed due to agents' influence	54
13. Number of negro agricultural clubs or community organizations formed this year for the general improvement of rural conditions	8
14. Number of members	330
15. Farm and rural improvements made due to agents' influence.	
New houses built	0
New barns built	3
New schools built	1
New churches built	0
New toilets built	27
Buildings improved or repaired	20
16. Number of Farm Makers' Clubs organized this year	0
17. Number of members in these clubs	0
18. Number of Home Makers' Clubs organized this year	0
19. Number of members in these clubs	0

ADULT NEGRO FARM DEMONSTRATION WORK

In a general way, the work conducted with negro farmers was the same as that with white farmers, after making allowances for different conditions and progress already made. In all cases an effort was made to adjust the work so that it will be as effective as possible.

The negro force, exclusive of a club agent, consists of 13 local agents and one district agent. Work was conducted in six counties and part of fourteen other counties.

Five of the agents have central county organizations thru which they work. During the year 34 negro farmers' clubs have been organized, with a total membership of 1524. This, with previous organizations, make a total of 122, with a membership of 6690.

Crop Growing Demonstrations

Corn being one of our most staple crops, every agent has been giving it proper attention. There were conducted 431 demonstrations with 324 of them reporting. The average yield was 35.7 bushels on 2186 acres, against a state average of less than 20 bushels, including all white and negro farmers.

The average yield of cotton on 700 demonstration acres was 1340 pounds, against a general state average of about 691 pounds.

Satisfactory work has been done in the growing of small grain, especially wheat and oats. Much rye has been planted as a winter cover crop. Hay and forage crops have been given due attention, although the yield of these was greatly reduced by the extreme drought. There have been planted over 300 acres of crimson clover. This crop has been given practically no attention heretofore by negro farmers.

All of the agents succeeded in getting planted a considerable acreage of summer legumes. A number of them introduced successfully soy and velvet beans. The acreage of the former being 753 and the latter 157. Most of the agents gave due attention to the growing of Irish and sweet potatoes.

Orchard work has been promoted in most instances, especially the proper growing and caring for small orchards for home use.

Livestock Work

An effort in improvement of dairy stock has resulted in bringing into the territory 13 bulls and 32 cows and heifers of improved strains. Along with this, due attention has been given to the growing of pastures and forage crops. Practically nothing has been done with beef cattle.

Much attention has been given to getting more pork grown. For breeding purposes 83 boars and 129 sows and gilts have been brought in. Along with this is taught the value of grazing crops for hogs, especially of soy beans, cow peas and winter growing legumes.

With poultry, 181 demonstrations have been conducted, with the improvement of poultry otherwise on over 1,400 farms. The teaching consists of poultry culling, the building of better houses, feeding a better balanced ration, and better general care. Of course improved strains are advocated.

Fertilizer Work

All agents have assisted farmers in the judicious and economical use of commercial fertilizers, especially the getting of fertilizer suitable for the dif-

ferent crops and different soil conditions. Much has been done by way of getting farmers to take better care of farm manure by building sheds and otherwise. Lime has been given attention by one-half of the agents.

A great deal has been accomplished under the head of farm and farmstead improvements. The summary, further on, shows very gratifying progress in these things.

Noteworthy Individual Accomplishments

Corn Growing. The following acreages and yields have been reported as demonstrations: Columbus County, 60 farmers on 700 acres, produced an average yield of 35 bushels. Gates County, 32 farmers, on 168 acres, produced 38 bushe's average. In Guilford County, 20 farmers on 120 acres averaged 36 bushels. In Hertford County, 60 farmers, on 130 acres, produced an average of 40 bushels. In Martin County, 48 farmers, on 240 acres, averaged 38 bushels. In Vance, 56 farmers, on 265 acres, averaged 36½ bushels. In Wake County, 42 farmers, 112 acres, averaged 46 bushels.

Organized Work

Two or three counties show splendid success in this work. The report from Gates County shows 7 community farm clubs organized during the year, with a membership of 238. These clubs are active in promoting better agriculture and better living conditions generally.

Hertford County shows five community clubs with a membership of 450. These clubs, with which the agent meets once per month, promote social life, the improvement of schools, better gardens, better poultry, soil improvement and sanitary conditions.

The report from Rowan County shows 7 community farm clubs organized during the year, with 300 membership. This makes a total of 18 clubs with a membership of 900 in the county. As a rule the agent meets with each of these regularly and conducts practically the whole work through them. They do much buying and selling cooperatively. When necessary they can easily procure money from bankers by three of the members signing a proper note. In Vance County there are 26 community clubs with over 900 membership. The clubs purchased over $18,000.00 worth of fertilizer, lime, farm implements, etc., cooperatively, thereby saving $2,800.00.

In Wake County one of the large financial matters is that of the organization of a farm loan association, through which $98.000.00 has been borrowed from the Federal Farm Loan Association, for the purpose of buying land. This organization also has ample credit at the banks at the county seat. The membership fee in this organization is $17.50. There are thirty local clubs with a total membership of 1,932.

In Columbus County there are 7 community clubs which together have procured $70,000.00 from the Federal Farm Loan Bank for the purchase of land.

In New Hanover County farmers' organizations purchased cooperatively $3,700.00 worth of fertilizer and other stuff, thereby saving over $700.00. They sold cooperatively one car of Irish potatoes, 12 cars of lettuce, 4 of cucumbers, and one of sweet potatoes, their total sales amounting to $13,350 with a gain of over $1,200 by the cooperative transaction.

In Sampson County the agent helped the farmers in the purchase of 200 bushels of seed rye, 775 bushels of seed oats, which were planted for winter cover crops and grazing to help tide over the shortage of forage crops.

A special campaign was put on thru the agents for the growing of winter cover crops. Much good-natured rivalry was created among them. The

agent's report from Guilford shows that he won in the competition as follows:

Kind of Crop	*No. of Farmers*	*Acres*
Red Clover	296	865
Crimson Clover	149	948
Oats and vetch	150	200
Sapling Clover	23	69
Rye	120	650
5	738	2732

SUMMARIES

Organizations

1. Number of central county organizations supporting the work	14
2. Number of community farmers' clubs assisted in organization this year	58
Total membership	1927
3. Number of community farmers' clubs now in demonstration territory	185
Total membership	8622
4. Number of local lodges of Granges, Farmers' Unions, etc., as community organizations supporting the work	218
Total membership	3948
5. Number of community farmers clubs ceased to exist during the year	11
6. Number of clubs organized so as to include the farmer's wife, children and others, in their membership	97
7. (See notes on organizations.)	
8. Number of community farmers' clubs dependent on the county agent for their existence and the continuation of their effort	13
9. Number of clubs having a community plan or program of work	6
10. Number of county organizations having a definite plan of work with reference to the county	4
11. Number so thoroughly organized that someone in every community or school district assists in extension work and through whom every farm family can be reached	8

Cooperative Buying and Selling

		Amount Saved
Bought	$59,572	$6,489
Sold	13,350	1,225
	$72,922	$7,714

Corn

1. Number of demonstrators	460
2. Number of demonstrators reporting	353
3. Total acreage of corn grown under improved methods on demonstrated farms	2472
4. Average yield per acre on demonstrations (bushels)	35.7
5. Estimated average yield for entire state (bushels)	20
6. Increased yield on demonstrations over ordinary methods (bushels)	16.4

7. Number of cooperators	1542
8. Total acreage of corn grown under improved methods by cooperators	8889
9. Average yield per acre on demonstrations by cooperators	33.64
10. Number of farmers testing seed corn for germination	91
11. Number of bushels so tested for germination	138
12. Number of farmers planting pure or selected seed on their demonstrations	564
13. Acreage planted with pure or selected seed	1014
14. Number of farmers influenced to select seed for next year's crop	1182
15. Estimated amount of seed selected (bushels)	2432
16. Number who fall-plowed their demonstration acres	315
17. Number who turned under cover crops on their demonstration acres	355
18. Nothing reported on acres harvested for silage.	
19. Nothing reported on yield of silage.	
20. Number of acres "hogged down"	55
21. Estimated value per acre when utilized this way	$45.65
22. Number of acres treated for diseases or insect pests	50
23. Number of farmers directly influenced to use better methods in growing corn this year	2284
24. Estimate of how many were indirectly influenced	2963

Cotton

1. Number of demonstrators	184
2. Number of demonstrators reporting	155
3. Total acreage grown under improved methods on demonstration farms	778
4. Average yield per acre on demonstration farms (lbs. seed cotton)	1340
5. Estimated average yield for entire state (lbs. seed cotton)	691
6. Increased yield per acre on demonstrations over ordinary methods (lbs. seed cotton)	680
7. Number of cooperators	1564
8. Total acreage grown under improved methods by cooperators	3100
9. Average yield per acre by cooperators (pounds seed cotton)	967
10. Number of farmers testing seed cotton for germination	14
11. Number of bushels so tested	66
12. Number of demonstrators who planted pure or selected seed	224
13. Acreage planted with pure or selected seed	1233
14. Number of farmers induced to field select seed for next year's crop	133
15. Number who fall-plowed their demonstration acres	127
16. Number who turned under cover crops on their demonstration acres	130
17. Nothing reported on treatment for diseases and insect pests	
18. Number of communities growing one variety of cotton	2
19. Number of farmers directly influenced to use better methods in cotton growing this year	758
20. Estimated number who were indirectly influenced	1590

Tobacco

1. Number of demonstrators	70
2. Number of demonstrators reporting	63

3. Total acreage in demonstrations	223
4. Average yield per acre (pounds)	886
5. Estimated average yield per acre for entire state (lbs.)	616
6. Increased yield per acre of demonstrations over ordinary methods (pounds)	270
7. Number of farmers induced to plant pure selected seed	379
8. Acreage planted with pure or selected seed	2227
9. Number of farmers treated tobacco seed for disease	4
10. Number of acres this treated seed planted	33
11. Number of farmers directly influenced to use better methods in growing tobacco this year	227
12. Estimated number who were indirectly influenced	368

Tomatoes

1. Number of demonstrators	25
2. Number of demonstrators reporting	13
3. Total acreage in demonstrations	23
4. Average yield per acre (bushels)	159
5. Estimated average yield per acre for entire state (bushels)	125
6. Increased yield per acre of demonstrations over ordinary methods (bushels)	34
7. Number of farmers induced to plant pure or selected seed	13
8. Number of farmers induced to field select seed for next year's crop	29
9. Nothing reported on acreage planted with improved seed	
10. Number who fall-plowed their demonstration acres	10
11. Number who turned under cover crops on their demonstration acres	7
12. Number of tomato farmers influenced to adopt a rotation system	9
13. Number of acres treated for insect pests	18
14. Estimated increased value per acre resulting from treatment	$30.00
15. Nothing reported on acres treated for disease.	
16. Nothing reported on results of treatment for disease.	
17. Number of demonstrators who grew their own plants	16
18. Number of farmers induced to construct hot beds	26
19. Number of farmers directly influenced to use better methods in growing tomatoes this year	16
20. Estimated number who were indirectly influenced	25

Wheat

1. Number of demonstrators	112
2. Number of demonstrators reporting	97
3. Total acreage grown under improved methods on demonstration farms	751
4. Average yield per acre on demonstrations (bushels)	15
5. Estimated average yield per acre for entire state (bushels)	10
6. Increased yield per acre on demonstrations over ordinary methods (bushels)	5
7. Number of cooperators	593
8. Total acreage grown under improved methods by cooperators	3339
9. Average yield per acre by cooperators (bushels)	12
10. Number of farmers testing seed for germination	24
11. Number of bushels so tested	318
12. Number of demonstration acres threshed for grain	551

13. Acreage planted with pure or selected seed	2610
14. Number of demonstration acres cut for hay	0
15. Nothing reported on average yield of hay per acre.	
16. Nothing reported on increased yield over ordinary methods.	
17. Number of acres grazed off	200
18. Estimated value per acre of grazing	$15.00
19. Nothing reported on number of acres turned under.	
20. Number of bushels of seed treated for smut, rust, etc	700
21. Number of farmers directly influenced to use better methods in growing this crop this year	710
22. Estimated number who were indirectly influenced	358

Rye

1. Number of demonstrators	127
2. Number of demonstrators reporting	69
3. Total acreage grown under improved methods on demonstration farms	1185
4. Average yield per acre on demonstrations (bushels)	11
5. Estimated average yield per acre for entire state (bushels)	5.5
6. Increased yield per acre on demonstration over ordinary methods (bushels)	4
7. Number of cooperators	69
8. Total acreage grown under improved methods by cooperators	356
9. Average yield per acre by cooperators (bushels)	8
10. Number of farmers testing seed for germination	225
11. Number of bushels so tested	932
12. Number of demonstration acres threshed for grain	6
13. Acreage planted with pure or selected seed	602
14. Number of demonstration acres cut for hay	383
15. Average yield of cured hay per acre on demonstrations (tons)	1.6
16. Increase per acre of cured hay on demonstrations over ordinary methods (tons)	.60
17. Number of acres grazed off	796
18. Estimated value per acre of grazing	$22.00
19. Number of acres turned under for soil improvement	8646
20. Number of bushels of seed treated for smut, rust, etc	50
21. Number of farmers directly influenced to use better methods in growing this crop this year	193
22. Estimated number indirectly influenced	257

Oats

1. Number of demonstrators	239
2. Number of demonstrators reporting	238
3. Total acreage grown under improved methods on demonstration farms	911
4. Average yield per acre on demonstration (bushels)	28.5
5. Estimated average yield per acre for entire state (bushels)	19
6. Increased yield per acre on demonstrations over ordinary methods (bushels)	9.5
7. Number of cooperators	329
8. Total acreage grown under improved methods by cooperators	597
9. Average yield per acre by cooperators (bushels)	15
10. Number of farmers testing seed for germination	158
11. Number of bushels tested	541

12. Number of demonstration acres threshed for grain	269
13. Acreage planted with pure or selected seed	760
14. Number of demonstration acres cut for hay	340
15. Average yield of cured hay per acre on demonstrations (tons)	1.55
16. Increase per acre of cured hay on demonstrations over ordinary methods (tons)	0.51
17. Number of acres grazed off	302
18. Estimated value per acre of grazing	$28.00
19. Number of acres turned under for soil improvement	100
20. Bushels of seed treated for smut, rust, etc	593
21. Farmers directly influenced to use better methods in growing this crop this year	569
22. Estimated number indirectly influenced	441

Alfalfa

1. Number of demonstrators	6
2. Number of demonstrators reporting	3
3. Total acreage in this crop grown under improved methods on demonstrations	8
4. Average yield per acre on demonstrations (tons of cured hay)	2.6
5. Estimated average yield for state	2.5
6. Number of acres cut for hay	3
7. Increased yield of demonstrations over ordinary methods	0.1
8. No report of number of acres grazed off.	
9. Nothing reported on estimated value per acre of grazing.	
10. Number of cooperators	2
11. Total acreage grown under improved methods by cooperators (tons of cured hay)	2
12. Nothing reported on average yield per acre of cooperators.	
13. Number of acres inoculated	3
14. Number of farmers who ordered inoculating material through agents from U. S. Depamtment of Agriculture	7
15. (Nothing reported) Turned under for soil improvement.	
16. (Nothing reported). Estimated number of acres turned under in the state.	
17. (Nothing reported). Number of acres sown this fall.	
18. Number of farmers directly influenced to use better methods in growing this crop this year	3
19. (Nothing reported). Estimated number indirectly influenced.	

Winter Legume Demonstrations (Crimson, Alsike, Bur, Vetch)

1. Number of demonstrators	121
2. Number of demonstrators reporting	101
3. Total acreage in this crop grown under improved methods on demonstrations	349
4. Average yield per acre on demonstrations (tons of cured hay)	2
5. Estimated average yield per acre for entire state (tons of cured hay)	1
6. Number of acres cut for hay	206
7. Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	0.8
8. Number of acres grazed off	70
9. Estimated value per acre of grazing	$15.30
10. Number of cooperators	142
11. Total acreage grown under improved methods by cooperators	403
12. Average yield per acre by cooperators (tons of cured hay)	1.3

13. Number of acres inoculated	86
14. Number of farmers who ordereed inoculating material through Agent from U. S. Dept. of Agriculture	74
15. Number of demonstration acres were turned under for soil improvement	75
16. Estimated total number of acres in state turned under by agents' advice	1353
17. Number of acres sown this fall	1443
18. Number of farmers directly influenced to use better methods in growing this crop this year	192
19. Estimated number indirectly influenced	203

Mixed Demonstrations

1. Number of demonstrators	142
2. Number of demonstrators reporting	72
3. Total acreage in this crop grown under improved methods on demonstrations	156
4. Average yield per acre on demonstrations (tons of cured hay)	2.5
5. Estimated average yield per acre for entire state (tons of cured hay)	2.4
6. Number of acres cut for hay	65
7. Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	0.1
8. Number of acres grazed off	33
9. Estimated value per acre of grazing	$40.50
10. Number of cooperators	44
11. Total acreage grown under improved methods by cooperators	80
12. Average yield per acre by cooperators (tons of cured hay)	1.5
13. Number of acres inoculated	55
14. Number of farmers who ordered inoculating material through Agent from U. S. Department of Agriculture	47
15. Number of demonstration acres turned under for soil improvements	59
16. Estimate total number of acres in state turned under by agents' advice	890
17. Number of acres sown this fall	409
18. Number of farmers influenced to use better methods in growing this crop this year	451
19. Estimated number of farmers indirectly influenced	230

Red Clover

1. Number of demonstrators	110
2. Number of demonstrators reporting	89
3. Total acreage in this crop grown under improved methods on demonstrations	386
4. Average yield per acre on demonstrations (tons of cured hay)	2.1
5. Estimated average yield per acre for entire state (tons of cured hay)	1.4
6. Number of acres cut for hay	39
7. Increased yield of demonstrations over ordinary methods	0.7
8. Number of acres grazed off	89
9 Estimated value per acre of grazing	$20.00
10. Number of cooperators	407

11. Total acreage grown under improved methods by cooperators	1363
12. Average yield per acre by cooperators (tons of cured hay)	1.3
13. Number of acres inoculated	8
14. Number of farmers who ordered inoculating material through Agent from U. S. Department of Agriculture	34
15. Number of demonstration acres turned under for soil improvement	258
16. Estimate total number of acres in county turned under by agent's advice	1548
17. Number of acres sown this fall	992
18. Number of farmers directly influenced to use better methods in growing this crop this year	492
19. Estimate how many were indirectly influenced	339

Cowpeas

1. Number of demonstrators	258
2. Numbers of demonstrators reporting	235
3. Total acreage of this crop grown under improved methods on demonstrations	1385
4. Average yield per acre on demonstrations (bushels of seed)	10
5. Average yield per acre on demonstrations (tons cured hay)	1.5
6. Estimated average yield per acre for entire state (bushels of seed)	7.5
7. Estimated average yield per acre for entire state (tons cured hay)	1
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	2.5
9. Increase over state yield (tons cured hay)	.5
10. Number of cooperators	499
11. Total acreage grown under improved methods by cooperators	1549
12. Average yield per acre by cooperators (bushels of seed)	7.9
13. Average yield per acre by cooperators (tons cured hay)	1.2
14. Number of farmers testing seed for germination	5
15. Total number of bushels seed so tested	18
16. Acreage planted with pure or selected seed	324
17. Total acreage of demonstrators and cooperators threshed for seed	586
18. Total acreage of demonstrators and cooperators cut for hay	599
19. Number of acres grazed off	372
20. Estimated value per acre of grazing	$20.00
21. Total number of acres turned under for soil improvement	1277
22. Nothing reported on number acres inoculated by Dept. cultures.	
23. Nothing reported on number acres inoculated by soil cultures	
24. Nothing reported on number of acres inoculated by commercial cultures.	
25. Estimated number of acres agents planted this year to this crop due to influence	2827
26. Number of farmers directly influenced to use better methods in growing this crop this year	396
27. Estimated number indirectly influenced	506

Soy Bean Demonstrations

1. Number of demonstrators	248
2. Number of demonstrators reporting	215

3. Total acreage of this crop grown under improved methods on demonstrations	753
4. Average yield per acre on demonstrations (bushels of seed)	14
5. Average yield per acre on demonstrations (tons of cured hay)	3
6. Estimated average yield per acre for entire state (bushels of seed)	9
7. Estimated average yield per acre for entire state (tons of cured hay)	2.7
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	5
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0.3
10. Number of cooperators	150
11. Total acreage grown under improved methods by cooperators	369
12. Average yield per acre by cooperators (bushels of seed)	12.9
13. Average yield per acre by cooperators (tons cured hay)	2
14. Number of farmers testing seed for germination	2
15. Total number of bushels seed so tested	4
16. Acreage planted with pure or selected seed	585
17. Total acreage of demonstrators and cooperators threshed for seed	267
18. Total acreage of demonstrators and cooperators cut for hay	367
19. Number of acres grazed off	453
20. Estimated value per acre of grazing	$34.00
21. Total number of acres turned for soil improvement	35
22. Nothing reported on acres inoculated by Dept. cultures.	
23. Total number of acres inoculated—by inoculated soil	40
24. Total number of acres inoculated—by commercial cultures	9
25. Estimated number of acres planted this year to this crop due to agent's influence	1129
26. Number of farmers directly influenced to use better methods in growing this crop this year	484
27. Estimated number indirectly influenced	516

Velvet Beans

1. Number of demonstrators	69
2. Number of demonstrators reporting	66
3. Total acreage of this crop grown under improved methods on demonstrations	157
4. Average yield per acre on demonstrations (bushels of seed)	11
5. Average yield per acre on demonstrations (tons cured hay)	3
6. Average yield for state (bushels of seed)	9
7. Estimated average yield per acre for entire state (tons cured hay)	2
8. Average increase over state yields (bushels)	2
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1
10. Number of cooperators	4
11. Total acreage grown under improved methods by cooperators	7
12. Nothing reported on average yield of cooperators (bus.).	
13. Nothing reported on average yield of cooperators (tons).	
14. Nothing reported on number farmers testing seed.	
15. Nothing reported on number bushels seed tested.	
16. Acreage planted with pure or selected seed	24

17. Total acreage of demonstrators and cooperators threshed for seed	10
18. Total acreage of demonstrators and cooperators cut for hay	26
19. Number of acres grazed off	93
20. Estimated value per acre of grazing	$32.50
21. Total number of acres turned under for soil improvement	35
22. Total number of acres inoculated by Dept. cultures	
23. Nothing reported on acres inoculated by soil.	
24. Nothing reported on acres inoculated by commercial cultures	
25. Estimated number of acres planted this year to this crop due to agent's influence	119
26. Number of farmers directly influenced to use better methods in growing this crop this year	91
27. Estimated number indirectly influenced	84

Peanuts

1. Number of demonstrators	108
2. Number of demonstrators reporting	76
3. Total acreage of this crop grown under improved methods on demonstrations	347
4. Average yield per acre on demonstrations (bushels of seed)	50
5. Average yield per acre on demonstrations (tons cured hay)	2
6. Estimated average yield per acre for entire state (bushels of seed)	40
7. Estimated average yield per acre for entire state (tons of hay)	2
8. Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	14
9. Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0
10. Number of cooperators	214
11. Total acreage grown under improved methods by cooperators	1210
12. Average yield per acre by cooperators (bushels of seed)	42.5
13. Average yield per acre by cooperators (tons cured hay)	1
14. Number of farmers testing seed for germination	0
15. No report on number bushels seed tested.	
16. Acreage planted with pure or selected seed	395
17. Total acreage of demonstrators and cooperators threshed for seed	1152
18. Total acreage of demonstrators and cooperators cut for hay	400
19. Number of acres grazed off	75
20. Estimated value per acre of grazing	$10.00
21. Total number of acres turned under for soil improvement	5
22. Nothing reported on number acres inoculated by Dept. cultures	
23. Nothing reported on number acres inoculated by soil cultures.	
24. Nothing reported on number acres inoculated by commercial cultures.	
25. Estimated number of acres planted this year to this crop due to agent's influence	950
26. Number of farmers directly influenced to use better methods in growing this crop this year	136
27. Estimated number indirectly influenced	50

Irish Potatoes

1. Number of demonstrators	103
2. Number of demonstrators reporting	92

3. Total acreage of potato demonstrations	133
4. Average yield per acre on demonstrations (bushels)	75
5. Estimated average yield per acre for entire state (bushels)	80.5
6. Estimated number of acres planted with treated seed	29
7. Estimated number of acres on which foliage was treated for diseases and insect pests	76
8. Number of farmers who used certified seed through agent's influence	106
9. Total acreage planted with certified seed	100
10. Number of farmers directly influenced to use better methods in growing this crop this year	90
11. Estimated number indirectly influenced	83

Sweet Potatoes

1. Number of demonstrators	134
2. Number of demonstrators reporting	97
3. Total acreage of potato demonstrations	235
4. Average yield per acre on demonstrations (bushels)	155
5 Estimated average yield per acre for entire state (bushels)	97
6. Estimated number of acres planted with treated seed	141
7. Estimated number of acres on which foliage was treated for diseases and insect pests	30
8. Estimated increase acreage this year over last year due to county agent's work	970
9. Nothing reported on storage houses erected.	
10. Nothing reported on capacity of such houses.	
11. Number of storage houses in the state (by negro agents advice)	3
12. Total capacity of these storage houses (bushels)	1500
13. Total number of bushels put in storage this year	1000
14. Number of farmers directly influenced to use better methods in growing this crop this year	237
15. Estimated number indirectly influenced	362

Orchards

1. Number of demonstration home orchards	*Trees*
Apple	268
Peach	572
Other	132
2. Total number of trees in these demonstrations	9015

	Orchards	*Trees*
3. Orchards inspected by agents	250	11,915
4. Orchards pruned due to agent's influence	324	12,772
5. Orchards sprayed due to agent's influence	63	2,123
6. Peach orchards treated for borers due to agent's influence	67	1,808
7. Orchards planted due to agent's influence	34	1,275
Total	738	29,893

	Trees
8. Number of commercial orchards in the state—Apple 17	2150
9. Number of commercial orchards in the state—Peach 11	5350
10. Number of commercial orchards in the state—Other 7	363
11. Number of commercial orchards agents have assisted in	

caring for 25
12. Number of trees actually sprayed by agents 847
13. Number of trees actually pruned by agents..... 1879
14. Number of trees actually wormed by agents..... 434
15. Estimated value of increased production due to demonstration methods $1,177.00

Horses

1. Number of pure-bred stallions brought into the state this year due to agents' influence 0
2. (Nothing reported).
3. (Nothing reported).
4. Number of demonstrations in feeding horses or mules.... 10
5. Number of horses or mules in these demonstrations 40
6. Number of horses or mules fed and cared for according to methods agents advocated 74
7. Number of pure-bred stallions in territory now..... 0
8. Number of pure-bred jacks in territory now 2

Dairy Cattle

1. Number of head of pure-bred bulls brought into the state this year through agents' influence 13
2. Number of head of pure-bred cows or heifers brought into the state this year through agents' influence 32
3. Number of head of pure-bred dairy cattle have you assisted your farmers in selling this year through individual sales.. 21
4. Number of head of pure-bred dairy cattle have you assisted your farmers in selling this year through group sales..... 2
5. Number of grade dairy cows have been brought into the county for breeding purposes this year through your influence 3
6. Number of cows have been tested at your instance to determine the profitable milk producers 47
7. Number of agents carrying Babcock tester 2
8. Number of farmers induced to feed a better balanced ration to their stock 344
9. Number of head of stock so fed 597
10. Number of demonstrations in dairy work supervised..... 36
11. Number of cows in these demonstrations..... 3
12. Nothing reported on cream stations.
13. Nothing reported.
14. Nothing reported on cream routes.
15. Nothing reported on cheese factories.
16. Nothing reported.
17. Number of pure-bred dairy bulls in the demonstration territory now 27
18. Number of pure-bred dairy cows in demonstration territory now 186
19. (Nothing reported.)
20. (Nothing reported.)
21. (Nothing reported.)
22. (Nothing reported.)
23. (Nothing reported.)
24. (Nothing reported.)
25. (Nothing reported.)

Hogs

1. Number of head of pure-bred boars brought in this year due to agents' influence	83
2. Number of head of pure-bred sows or gilts brought in this year due to agents' influence	129
3. Number of head of pure-bred hogs agents assisted farmers in selling this year through individual sales	216
4. Number of head of pure-bred hogs agents assisted farmers in selling this year through group sales	10
5. Number of herds of pure-bred hogs started through agents' influence	155
6. Number of hog feeding demonstrations agents supervised	44
7. Number of hogs in these demonstrations	438
8. Number of these demonstrations on which records were kept	19
9. Number of self-feeders built at agents' suggestions	3
10. Number of farmers induced to start the growing of grazing crops for hogs	940
11. Estimated number of hogs fed or cared for according to methods which agents' advocated	5635
12. Give number of pure-bred boars in demonstration territory now	501

Beef Cattle

(Nothing reported.)

Dipping Vats

(Nothing reported.)

Sheep and Goats

(Nothing reported.)

Silos

(Nothing reported.)

Poultry

1. Number of poultry demonstrations	181
2. Number of each kind of poultry grown and cared for according to methods which agents advocated:	
Chickens	10,604
Ducks	0
Guineas	2,000
Turkeys	5,212
Geese	350
Total	18,166
3. Number of farms on which poultry management has been improved as a result of agents' work	1471
4. Number of birds on these farms	17,427
5. Number of communities which have adopted a standard variety of poultry	15
6. Number of cream routes on which poultry products are collected	0

7. Number of flocks culled through agents' efforts..... 110
8. Number of birds in flocks culled 4,195
9. Number of birds eliminated through culling..... 1,340
10. Number of farmers induced to raise standard bred poultry this year 258
11. Number of demonstrators were induced to practice early hatching 230
12. Number of winter feeding demonstrations 77
13. Number of birds in these demonstrations 2210
14. Number of new poultry houses erected at agents' suggestion 57
15. Number of poultry houses remodeled at agents' suggestion 55

Live Stock Diseases and Pests

1. Number of demonstrations conducted through agents' influence in treating or testing livestock for the control of the following:

	Demonstrations.	*Animals treated.*
Cattle:		
Blackleg	0	0
Anthrax or charbon	0	0
Digestive and other trouble	7	7
Tuberculosis	0	0
Ticks	13	252
Lice	3	54
Hogs:		
Cholera (single treatement)	0	0
Cholera (simultaneous treatment)	15	315
Digestive and other trouble	3	11
Worms	8	56
Lice	22	328
Mange	22	60
Sheep:		
Stomach worms	0	0
Digestive and other trouble	10	10
Grubs	1	1
Scab	0	0
Ticks	0	0
Horses:		
Spinal meningitis	1	3
Digestive ailments	0	0
Anthrax or charbon	0	0
Distemper	0	0
Accidents	1	3
Other troubles	1	2

2. Agents actually gave the following number of demonstrations with the number of animals as indicated: (treated by agents)

	Demonstrations	*Animals*
Cattle, for Blackleg	0	0
Cattle, for Tuberculosis	0	0
Cattle, for Anthrax or charbon	0	0
Hogs, for Cholera	14	297
Horses, for Anthrax or charbon	0	0

3. Number having instruments for such demonstrations..... 3

Fertilizers

1. Number of farmers agents have advised regarding the proper use of fertilizers	2651
2. Number of fertilizer demonstrations farmers conducted with agents	267
3. Total acreage in these demonstrations	941
4. Amount of fertilizer used on such demonstrations (tons)	204
5. Number of communities influenced to buy fertilizers co-operatively	71
6. Quantity bought cooperatively (tons)	911
7. Value of fertilizer bought cooperatively (actually paid by cooperative purchase)	$50,719.13
8. Total amount saved by cooperative purchases	5,247.28
9. Number of farmers home-mixing fertilizer on agents' advice	277
10. Estimated number of tons home-mixed	717
11. Estimated saving to farmers (per ton)	$2.60

Manure

1. Number of farmers induced to take better care of farm manure	1943
2. Number of manure sheds built at agents' suggestion	258
3. Number of composting farm manure and waste products	1237
4. Number of manure spreaders bought this year through agents' influence	21
5. Number of farmers using phosphate or other material for reinforcing farm manure	9654

Silos

(Nothing reported.)

Lime

1. Number of demonstrators	135
2. Number of demonstrators reporting	81
3. Total number of acres in lime demonstrations	686
4. Number of farmers, other than demonstrators, using lime this year due to agents' influence	372
5. Quantity of burned lime used (tons)	672
6. Quantity of limestone or its equivalent used (tons)	1025
7. Total number of acres treated this year	1324
8. Number of local sources of lime developed	0
9. Number of lime crushers installed as a result of agents' work	1
10. Number of lime kilns built this year	0
11. Number of lime sheds constructed as a result of agents' work	1
12. Number of carloads shipped into state	19
13. Number of farms on which soil was tested for acidity	153

Farm and Farmstead Improvements

(Things done with agents' assistance and advice)

	Dwelling	*Other*
1. Number of buildings erected	121	90
2. Number of farm buildings improved	121	68
3. Number of new building plans furnished	13	28
4. Number of farm buildings painted or white-washed	110	39

5. Number of home water systems installed or improved this year	10
6. Total number of such systems in the state now	21
7. Number of home lighting systems installed in demonstration territory this year	13
8. Total number of such systems in demonstration territory now	44
9. Number of windmills erected this year	1
10. Number of home grounds improved	310
11. Number of farm and home sanitary conditions improved	882
12. Number of homes screened against flies and mosquitoes	957
13. Number of sanitary privies erected	618
14. Number of septic tanks installed	47
15. Number of telephone systems installed	7
16. Number of farmers furnished plans and induced to adopt systematic crop rotations	575
17. Total acreage of such rotations	4465
18. Number of new pastures established	166
19. Total acreage of new pastures established	1363
20. Number of old pastures renovated	92
21. Total acreage of old pastures renovated	857
22. Number of drainage systems established in the state	7
23. Number of farmers induced to drain all or part of their farms	350
24. Nothing reported on number of acres drained by tile.	
25. Number of such acres drained by ditch	5235
26. Number of farmers induced to remove stumps	105
27. Number of acres from which stumps were removed	573
28. Number of farmers induced to terrace their sloping lands	284
29. Total acreage so terraced	1010
30. Number of home gardens planted or improved	1602
31. Number of road improving demonstrations assisted in	406
32. Number of miles of improved roads resulting therefrom	72
33. Number of farmers who planted cover crops to be turned under	1291
34. Number of new implements and tools bought:	

Binders	8	1-horse cultivators	169
Hay presses	5	Plows	294
Gas engines	21	Hay loaders	0
2-Horse cultivators	45	Farm levels	1
Tractors	12	Grading machines	1
Motor trucks	14	Hay rakes	20
Corn planters	95	Ensilage cutters	30
Ditching machines	11	Cream separators	0
Mowers	42	Spraying machines	18
Grain drills	32	Manure spreaders	4
Disk harrows	19	Small tools	551

Miscellaneous Extension Work

1. Number of visits by agents to:	
Demonstrators	6,942
Cooperators	3,033
Other farmers	3,859
Business men	460
Boys and Girls' club members	2,928
Total	17,222

2. Number of miles traveled:	
Railroad	25,245
Team	7,632
Automobile	53,666
Otherwise	2,554
Total	89,097
3. Calls on agent at office and home relative to work—personal	6,879
4. Calls on agent at office and home relative to work—telephone	692
5. Number of farmers' meetings held under auspices of agents Extension Division	1,259
6. Number of meetings of all kinds addressed, including field meetings	1,312
7. Total attendance at these meetings (approximate)	119,569
8. Number of field meetings held by agents	229
9. Total attendance at these meetings	3,906
10. Per cent of time spent at office	26
How divided:	
Correspondence	55
Conference	54
Miscellaneous	31
11. Per cent of time spent in field work	74
How divided:	
Supervising regular demonstrations	52.2
Other farm visits	16.1
At meetings	14.1
Assisted in short course work	9.7
Organization and marketing	7.9
12. Number of official letters written	10,006
13. Number of articles relating to the work prepared for publication	109
14. Number of different circular letters prepared and sent out by agents	1,083
15. Total number of copies of such letters	86,774
16. Number of bulletins or circulars of U. S. Department of Agriculture distributed	14,253
17. Number of bulletins or circulars from State college or State Department of Agriculture distributed	4,462
18. Number of visits to schools relating to work	636
19. Number of schools assisted in outlining an agricultural course	60
20. Number of extension schools or short courses assisted in	3
21. Total attendance at the schools	2,884
22. Total number of days engaged in these schools	75
23. Number of farmers who attended short courses at colleges as a result of agents' work	644
24. Number of club boys who entered college for first time this year	103
25. Number of visits by specialists from college or the Dept.	28
26. Number of county fairs held this year	6
27. Number of demonstrators, cooperators and club members having exhibits	351
28. Number of these who won prizes	315
29. Number of demonstrations in truck or small fruit	30

30. Number who were successful from a financial standpoint.. 29
31. Number of farm account books distributed to farmers..... 714
32. Number of farmers keeping complete cost records at agents' instance 107
33. Number of farmers keeping partial cost records at agents' instance 694
34. Number of farmers practicing fall plowing as a result of county agent's work 1,005
35. Number wood lots improved at agents' suggestion 40
36. Number of farmers influenced to grow sugar cane or sorghum for syrup 1,999
37. Number of farmers who began keeping bees this year at agents' suggestion 12
38. Number of hives involved in these demonstrations..... 29
39. Number of farmers induced to transfer from old to improved hives 2
40. Number of hives involved in these transfers..... 5
41. How many new queens introduced (none reported).
42. How many honey extractors purchased (none reported).

WHITE BOYS CLUB WORK

The agents making reports on club work are as follows: U. A. Miller, Alexander; J. W. Goodman, Avery; R. K. Craven, Bladen; J. W. Hendricks, Catawba; R. E. Lawrence, Cleveland; C. Lee Gowan, Gaston; R. W. Graeber, Iredell; S. J. Kirby, Johnston; C. M. Brickhouse, Lenoir; G. W. Falls, Pasquotank; R. T. Melvin, Sampson; O. H. Phillips, Stanly; Frank Fleming, Swain; J. C. Anthony, Vance; R. W. Johnson, Washington; A. G. Hendren, Wilkes; L. D. Thrash, Rutherford; W. L. Smarr, Lincoln; J. Lindley, Transylvania; L. P. Herring, New Hanover; G. D. Burroughs, Nash; M. W. Wall, Moore; C. H. Stanard, Durham; C. C. Proffitt, Buncombe; J. W. Cameron, Anson. This report shows there were 2001 members enrolled in all clubs, with 591 in plant clubs and 1,410 in livestock clubs. There were 202 plant and 389 livestock club members making a complete report.

Results are not as great as we should like to report. There have been many things to handicap club work this year. The campaign for members in the cooperative marketing association for the sale of peanuts, cotton and tobacco was a very vital and all absorbing issue in every county growing one or more of these crops. This work drew heavily on the time of the county agent as well as that of the state club agent. This campaign started in February and was kept up throughout the year. The results are that the three crops, peanuts, cotton and tobacco will be sold cooperatively in 1922.

The organized group or community club is being used to a greater extent than ever by all agents. Twenty-four out of the 25 counties reporting did their work largely through 146 organized clubs. Local leaders are realizing the importance of club work. This is one of the most encouraging features of the year's work, for without local leadership to assist the agent in conducting the work, we can never reach the thousands of boys and girls that we need to reach through club work.

The club encampment is proving to be very valuable to club work. If handled wisely it will aid in the development of local leaders and will be

an attractive feature for members. In one county (Sampson) the camp is being used as an inducement to the members to live up to the club requirements. No boy or girl can attend the camp except as a club member. A club member must have his record complete to date, and if a second year member, must have made his final report before he can attend the camp. The members from a club cannot attend the camp unless accompanied by the local leader.

The work at these camps is largely recreational with the exception of a few inspirational talks and a small amount of work, such as rope work, construction of poultry and pig club fixtures and instructions in the operation of home lighting plants. There were 24 held in the state this year.

Fairs and Exhibits

Every community, county, district, and the state fair offers special prizes to club members. The club members exhibit largely at community and county fairs. Our exhibits at the State Fair have never been very large owing to the transportation charges.

The Club Demonstrations at State Fair

A new feature in the form of a demonstration was staged at the State Fair by members of the poultry and corn club. There were five poultry and five corn club teams. Each team was given a booth with an eight foot front in which they gave daily demonstrations. The following counties took part in these demonstrations: Catawba, Buncombe, Cleveland, Gaston, Lincoln, Stanly, Sampson, and Cumberland. The Cumberland team won the poultry trophy and the Cleveland team won the corn trophy. Through Mrs. George Vanderbilt, Col. Pogue, Mr. Denson, President, Secretary and Treasurer, respectively of the State Fair, and their interest in club work, these club boys and girls were entertained and given free trips to the State Fair. The demonstrations attracted the attention of everyone.

Ninth Congressional District Corn Club Contest

A special contest for the corn club members of the ninth congressional district was made possible by Congressman A. L. Bulwinkle of Gastonia. The district was divided into three divisions. The prize offered by Congressman Bulwinkle was three trips to Washington, D. C. for a week, with one trip allotted to each of the three divisions. The divisions and counties included in each are as follows:

Division 1—Mecklenburg, Gaston, and Cleveland.
Division 2—Lincoln, Catawba, and Burk.
Division 3—Avery, Mitchell, Yancey, and Madison.

No one entered the contest from division three. There was a total of 93 boys between the age of 15 and 18 from the two other divisions.

The highest record made in each county reporting is as follows:

Division 1—Gaston County, Rochell Absher, Bessemer City; Yield 61.64 bushels, cost $29.35, profit $32.29.
Cleveland County, Boyce Mooney, Shelby, Route 5; Yield 65.25 bushels, cost $41.62, profit $23.63.
Mecklenburg County, Glenn R. Boyd, Charlotte, Route 8; Yield 83.88 bushels, cost $53.30, profit $30.54.

Division 2—Catawba County, Floyd E. Lutz, Newton, Route 4; yield 89.98 bushels, cost $35.50, profit $54.48.
Lincoln County, Worth Bland, Lincolnton, Route 1; Yield 61 bushels, cost $20.80, profit $40.20.

In every case corn was valued at $1.00 per bushel.

County Contest

The American Limestone Company of Knoxville, Tenn., contributed to club work in the state a $200 portable motion picture and stereopticon machine. This prize was offered to the county doing the best club work during the year, based on the following score:

Number organized clubs (6 a perfect score)	10	percent
Number enrolled in county (100 a perfect score)	10	"
Number meetings held (7 perfect score)	15	"
Percent of members attending meetings	20	"
" " " exhibiting club products	10	"
" " " making complete report	25	"
" " " attending county encampment	10	"
Total	100	"

The three highest scoring counties in this contest were Gaston 85.97 percent, Sampson 85.57 percent, and Catawba 82.87 percent.

Virginia Stroupe, pig and poultry club member of Lowell, Gaston County, won the Chicago trip offered by Wilson Martin Company of Philadelphia to the best livestock club member in the state. This is Virginia's last year as a club member, but she expects to be the club leader for the club in her community.

An assistant county agent was employed in Gaston County through the cooperation of the Gastonia Kiwanis Club, and the Gaston County Board of Education. It was more or less an experiment in this state, but the results were very satisfactory. When local support can be had we believe assistant agents should be put on to assist the county agent and especially with club work.

RECORD OF CROPS REPORTED BY BOYS' CLUBS

Kind of Club	Total Enrollment	Number of Acres	Complete Reports Received	Total Production (Bushels or Pounds)	Average Yield per Acre	Average Cost per Bushel or Pound	Total Cost of Production	Total Value of Crop	Total Profit	Estimate from Clubs Not Reporting: Number of Members	Estimated Total Production	Estimated Total Value
Corn	516	516	184	10,035 bu.	54.5 bu.	$.43	$4,333.02	$8,383.50	$4,050.48	332	12,281 bu.	$11,852.00
Peanuts	25	318	2	20 bu.	80 bu.	.50	10.00	60.00	50.00	23	643 bu.	809.00
Grain sorghum	13	4½	8	1,490 gals.	196 gal.	.43	215.00	490.00	275.00	5	175 gal.	175.00
Seed Cotton	28									28	36,800 lbs.	2,020.00
Lint Cotton	9	9	8	4530 lbs.	576 lbs.		242.00	992.98	750.38	1	475 lbs.	90.00

RECORD OF LIVESTOCK REPORTED BY BOYS' CLUBS

Kind of Club	Enrollment in Clubs	Complete Records Received	Total Number of Animals	Total Initial Weight (Pounds)	Total Final Weight (Pounds)	Average Cost Per Pound	Total Cost	Total Value	Total Profits	Estimate From Clubs Not Reporting: Number Members	Estimated Total Number Pounds	Estimated Total Value
PIGS:												
Growing Demonstrations	570	105	477	5,937	31,790		$4,221.90	$10,215.28	$5,993.38	410	49,949	$17,910.00
SHEEP:												
Demonstrations	10	0	100							10		1,000.00
DAIRY CATTLE:												
Growing Demonstrations	20	11	11				355.00	1,060.00	705.00	9		525.00
		NUMBER STARTING			PRODUCED							
		WITH BIRDS	WITH EGG		FIRDS	DOZ EGGS					No. Birds	Doz Eggs
POULTRY:												
Demonstrations	810	213 90	385		4,216	2,273	1,617.65	9,815.84	8,202.19	592	5533	2000	11,806

List of Boys Making 5 Best Records

Corn NAME	ADDRESS	Bushels	Variety	Cost per Bushel	Net Profit	Value of Prizes
William Parker	Elizabeth City, N. C.	139	Latham	$ .21	$ 108.77	$ 15.00
Alfred Jennings	Elizabeth City, N. C.	114	Latham	.25	85.65	9.75
Percy Jennings	Elizabeth City, N. C.	114	Latham	.25	84.60	9.00
Philip Winslow	Olisko, N. C.	89	----------	.22	69.31	10.00
Floyd Lutz	Newton, N. C., R. 4	89.9	----------	.39	54.48	----------

POULTRY:		No. of Birds	Total Value	Total Cost	Profit	Value of Prizes
Debtle Best	Albemarle, N. C.	27	$ 108.00	$ 25.00	$ 83.00	$ 3.00
Edna Stroupe	Lowell, N. C.	40	97.00	18.00	79.00	20.25
IngramPauline	Albemarle, N. C.	21	84.00	20.00	64.00	3.00
Virginia Stroupe	Lowell, N. C.	33	79.00	17.86	61.14	3.00
Paul Moose	----------	----------	----------	----------	56.60	21.00

PIGS:		No. of Animals	Original Value	Final Value	Total cost	Profit	Value of Prize
Nevie Manney	Bessemer City, N. C.	1	$ 10.00	$150.00	$ 11.60	$128.40	$ 23.00
Kemp Kiser	Bessemer City	1	15.00	150.00	8.50	126.50	25.50
Virginia Stroupe	Lowell, N. C.	1	12.00	150.00	14.46	123.60	53.44
I. M. Tull, Jr.	Kinston, N. C., R2	2	40.00	175.00	89.12	85.88	5.00
Fred Davis	Seven Springs, N. C.	1	17.50	100.00	29.30	70.70	3.00

PIGS, SOW AND LITTER DEMONSTRATIONS:		No. of Animals	Original Value	Final Value	Total Cost	Profit	Value Prize
Peter Brank	Castle Hayne, N. C.	10	$ 20.00	$160.00	$ 43.97	$116.03	$ 3.00
J. Blake	Castle Hayne, N. C.	11	20.00	160.00	47.31	112.69	5.00
Herman Walton	Wilmington, N. C.	9	20.00	150.00	41.16	108.84	0
Gertrude Brook	Castle Hayne, N. C.	10	20.00	150.00	42.72	107.28	0
J. D. Blake	Wilmington, N. C.	9	20.00	140.00	39.20	100.80	0

GENERAL SUMMARY

Number of counties reporting organized clubs	24
Number of organized clubs	146
Total members enrolled	2001
Number of community meetings held	755
Number of county club meetings held this year for business purposes	35
Number of encampments or short courses held	24
Number of boys entering college for the first time	38
Number of boys sent to State Fair this year	37
Number of boys sent to other educational trips this year	7
Number of club shows or exhibits this year	22
Value of prizes won by club boys on crops	$ 906.50
Value of prizes won by club boys on animals	$1931.25
Banks or individuals that loaned money to club boys to buy seed, livestock, etc.	25
Approximate amount so loaned	$1176.00
Amount lost, if any, because of these loans	0
Number of boys who have their own bank account	158
Total value club products reported and estimated	$72,204.00
Number of pure-bred pigs distributed to club boys	132
Number of grade pigs distributed to club boys	57
Number of pure-bred calves distributed to club boys	5
Number of grade calves distributed to club boys	1
Number of pure-bred sheep distributed to club boys	1
Number of grade sheep distributed to club boys	12
Number of pure-bred poultry distributed to club boys	110
Number of eggs from pure-bred poultry distributed to club boys (doz.)	529
Number of bushels of pure-bred seed corn distributed to club boys	4
Number of bushels of other pure-bred seed distributed to club boys	12
Number club members planted a catch crop	72

NEGRO BOYS CLUB WORK

Negro boys' club work was conducted in ten counties with the immediate supervision of local agents, and in fifteen counties outside of local agent territory, the club agent having the general oversight of all of it.

The principal demonstrations in club work were with corn, peanuts, cowpeas, soy beans, cotton, pigs and poultry. With corn the enrollment was 667, with 267 reporting. The average yield was 34 bushels per acre, with an average cost of 29 cents per bushel. Of the five best corn demonstrations the average yield was 52.4 bushels, at a cost of 19.8 cents, the profit per acre being $46.10. The total value was $9,078.00 and the profit $6,445.00.

In the pig clubs there were enrolled 539, with only 64 reporting. The records show that the gains were made at a cost of 7 to 9 cents per pound, or about an average of 8 cents.

The poultry club was the most popular of any, there being enrolled 1173, with 560 reporting.

The following tabulations give the results of the work in figures:

RECORD OF CROPS REPORTED BY BOYS' CLUBS										Estimate from Clubs Not Reporting		
Kind of Club	Total Enrollment	Number of Acres	Complete Reports Received	Total Production (bushels or pounds)	Average Yield Per Acre	Average Cost Per Bushel or Pound	Total Cost of Production	Total Value of Crop	Total Profit	Number of Members	Estimated Total Production	Estimated Total Value
Corn	667	267	267	9,078 bu.	34 bu	$ .29	2,632.60	$9,078.00	$6,445.38	257	6 694 bu.	$ 6.694.00
Peanuts	58	21	21	1,772 bu.	84 bu.	.24	435.71	3,291.20	2,858.48	37	635 bu	1,131.00
Peanut hay	14	26	14	26 tons	1 tons	3.00	80.25	180.00	100.28	2	2.5 tons	50.00
Irish potatoes	5	2	2	138 bu.	69 bu.	.26	35.88	207.00	171.12	3	200 bu.	400.00
Sweet potatoes	9	8	8	510 bu.	64 bu.	.32	163.20	510.00	346.80	3	220 bu.	220.00
Oats	4	4	4	240 bu.	60 bu.	.10	.24	240.00	216.00			
Pea hay	24	16	16	32 tons		6.00	384.00	960.00	576.00	8	16 tons	480.00
Soy beans	34	28	28	427 bu	35 bu.	1.14	486.78	854.00	367.22	5	85 bu.	170.00
Soy bean hay	76	7	7	16 tons	2 tons	6.66	102.30	365.30	262.90	1	1 tons	30.00
Seed cotton	16	16	11	5,267 lbs.	2,437 lbs.	.06	316.02	526.70	210.68	6	5,200 lbs.	520.00

Number of bushels of purebred seed corn distributed to club boys 7½ bu.
Number of bushels of other purebred seed distributed to club boys 5.
Number of club members who planted catch crops (beans, peas, etc.) 112

RECORD OF LIVESTOCK REPORTED BY BOYS' CLUBS

Kind of Club	Enrollment in Clubs	Complete Reports Received	Total Number of Animals	Total Initial Weight (Pounds)	Total Final Weight (Pounds)	Average Cost Per Pound	Total Cost	Total Value	Total Profit	Estimate Clubs NotReporting: Number Members	Estimated Total Number Pounds	Estimate Total Value
PIGS:												
Fattening demonstration	462	33	93	1,016	24,209	$ .08	$2,057.76	$3,566.50	$1,508.73	27	47,328	$ 4 363
Growing dems.	70	24	24	1,080	5,140	.07	359.80	1,200.00	840.20	27	7,035	1,000
Sow and litter	7	7	39	310	960	.09	86.40	664.60	528.20	16	950	340

		Number Starting		Produced							
		with birds	with eggs	Birds	Doz eggs					No. of Birds	Doz of Eggs
POULTRY:											
Demonstrations	1,173	560	613	9,425	854					385	5,621	748

Number of purebred pigs distributed to club boys 46
Number of grade pigs distributed to club boys 5.

Number of purebred poultry distributed to club boys 66.
Number of eggs from purebred poultry distributed to club boys (doz) 4.

List of Boys Making 5 Best Records

COTTON

Name	Address	Pounds Seed Cotton	Pounds Lint	Pounds Seed	Cost per Pound Seed Cotton	Net Profit
Cecil Brown	Hobgood	1320	502	718	$ .02	$ 43.56
Robert Grimes	Hobgood	1000	397	603	.03	29.80
Artie Jones	Statesville	2320	308		.05	40.75

PIGS—Fattening Demonstration.

Name	Address	Number of Animals	Original Value	Final Value	Total Cost of Gain	Profit
G. H. Royal	Clinton R5	8	$ 40.00	$ 320.00	$ 40.00	$280.00
J. McPhail	Clinton R5	3	45.00	180.00	45.00	135.00
John McPhail	Clinton R5	1	10.00	80.00	21.00	59.00
Richard Wray	Greensboro	2	40.00	225.00	140.00	85.00

PIGS—Growing Demonstration.

Name	Address	Number of Animals	Original Value	Final Value	Total Cost of Gain	Profit
A. D. Herring	Clinton R4	5	$ 20.00	$ 125.00	$ 11.40	$ 28.60
Rivera Everett	Robinsonville	1	10.00	50.00	34.65	67.35
England Hyman	Oak City	3	30.00	102.00	25.30	21.70
Lonnie Mills, Jr.	Williamston	2	25.00	72.00	25.30	21.70
M. D. Whitfield	Stokes	2	22.00	65.00	21.00	44.00
Nathaniel Roberson	Robinsonville	2	18.00	58.00	17.10	40.90

PIGS—Sow and Litter Demonstration.

Name	Address	Number of Animals	Original Value	Final Value	Total Cost of Gain	Profit
Plummer Green	Oak City	9	$ 36.00	$ 91.21	$ 28.40	$ 52.81

List of Boys Making 5 Best Records

CORN

Name	Address	Bushels	Variety	Cost per Bushel	Net Profit
R. J. Johnson, Jr.	Warsaw	50	Johnson P.	$ .13	$ 43.50
Henry Scales	Tobaccoville	47		.18	50.56
Henry Payne	Tobaccoville	53½		.23	46.50
Elmer Spears	Tobaccoville	62		.27	48.36
B. T. Bennett	Faison	60	Johnson P.	.18	42.00

PEANUTS

Name	Address	Bushels	Cost	Hay lbs.	Total Cost of Gain	Profit
Herman Riddick	Gatesville	32	$ .35	1,200		$ 34.80
William Green	Oak City	21	.21	1,250		49.20
Plummer Green	Oak City	39	.18	1,800		66.78
Martin Otterbudger	Parmele	49	.26	1,800		67.33
Charles Hysmith	Stokes	38	.21	1,150		46.89

WHITE POTATOES

Name	Address	Number of Bushels	Cost	Final Value	Total Cost of Gain	Profit
Geo. Washington	Winston-Salem	63	$ .31			$ 74.97
Lewis Shoose	Bethania	75	.34			87.00

BEEF CATTLE—Cow-Calf Demonstration

Name	Address	Number of Animals	Cost	Final Value	Total Cost of Gain	Profit
B. Parker	Roseboro	110	$ .10			$ 100.00
M. Devane	Clinton	75	.08			69.00
Nathan Green	Oak City	75	.21			59.25
Leroy James	Oak City	75	.23			75.34

List of Boys Making 5 Best Records

POULTRY DEMONSTRATION

Name	Address	Number of Birds	Total Eggs Produced	Total Value	Total Cost	Profit
H. E. Powell	Clinton	56	160	$ 64.00	$ 5.60	$ 58.40
M. E. Mathis	Clinton	20	60	24.00	4.00	20.00
Eunice Valentine	Tobaccoville	85	----	52.30	12.05	39.55
Dorsey Scales	Tobaccoville	72	----	42.30	10.14	34.86
Amanda Jones	Oak City	24	----	21.60	6.40	15.00

BOYS CLUB WORK

(Combined results of white and negro clubs)

In boys' club work we have reports from 25 counties conducting work with white boys and 25 counties with negroes.

The reports show a total of 335 organized agricultural clubs in the state. There were held during the year a total of 1095 community meetings and 140 county club meetings for business purposes. There were held 24 encampments and short courses for instruction and for recreational purposes. The encampments, especially, have proven to be very popular. Often the boys' and girls' club members meet together, either under tents or in some large suitable building. The program generally consists of lectures on various topics, instruction in technical club work as to better farming and home making, plays, games, contests of various sorts, swimming, etc. These annual county meetings are looked forward to with a great deal of pleasure and enthusiasm by the boys and girls during the year.

Separate, condensed summaries of the white clubs and of the negro clubs will be found elsewhere in this report. so the comparative progress being made in the two organizations can easily be seen.

Several human interest features will be found in the individual reports of the county and local agents, but they are too long to incorporate here.

RECORD OF CROPS REPORTED BY BOYS' CLUBS

Kind of Club	Total Enrollment	Number of Acres	Complete Reports Received	Total Production (Bushels or Pounds)	Average Yields Per Acre	Average Cost Per Bushel or Pound	Total Cost of Production	Total Value of Crops	Total Profit	Estimate From Clubs Not Reporting: Number of Members	Estimated Total Production	Estimated Total Value
Corn	1,183	783	451	19,113 bu.	44 25 bu.	$ .36	$6,965.00	$ 17,461.00	$ 10 405.00	589	18,975 bu.	$18,975.00
Peanuts	83	339	23	27,212 bu.	80 bu.	.37	13.155.00	3,266.20	2,855.00	59	1,270 bu.	1,916 00
Peanut hay	14	26	14	26 tons	1 ton	3.00	80.25	189.00	100.00	2	2.5 tons	50.00
Irish potatoes	5	2	2	138 bu.	69 bu.	.26	35.88	207.00	171.12	3	200 bu.	400.00
Sweet potatoes	9	8	8	510 lbs.	64 bu.	.32	163 20	510.00	346.80	3	220 bu.	220.00
Oats	4	4	4	240 bu.	60 bu.	.10	24.00	240.00	216.00			
Pea hay	24	16	16	32 tons		6.00	384.00	960.00	576.00	8	16 tons	480.00
Soy beans	34	28	28	427 bu.	35 bu.	1.14	486.78	854.00	367.00	10	185 bu.	320.00
Soy bean hay	76	7	7	16 tons	2 tons	6.66	102.30	365.00	262.90	1	1 ton	30.00
Seed cotton	54	16	11	5,267 lbs.	2,437 lbs.	.06	316.02	526.70	210.68	34	42,000 lbs.	2,540.00
Cotton lint	9	9	8	4,530 lbs.	576 lbs.		242.00	867.00	750.00	1	475 lbs.	90.00

RECORD OF LIVESTOCK REPORTED BY BOYS' CLUBS										Estimate From Clubs Not Reporting		
Kind of Club	Enrollment in Clubs	Complete Report Received	Total Number of Animals	Total Initial Weight (Pounds)	Total Final Weight (Pounds)	Average Cost Per Pound	Total Cost	Total Value	Total Profit	Number of Members	Estimated Total Number Pounds	Estimated Total Value
PIGS:												
Fattening demonstrations	462	33	93	1,616	21,209	$ .08	$ 1,936.72	$ 3,566.50	$ 1,629.78	217	47,328.00	$ 4,363.00
Growing demonstrations	640	189	501	7,017	36,930	.08	4,581.70	11,415.00	6,838.58	437	56,984.00	18,910.00
Sow and litter	7	7	39	310	960	.09	186 40	664.60	528.20	16	950.00	340.00
SHEEP:												
Demonstrations	10	0	100							10		1,000.00
		Number with birds	Starting with eggs	Produced Birds	Produced Doz eggs						No. of Birds	Doz of Eggs
POULTRY:												
Demonstrations	1,983	773	650	998	13,641	3,127				977	14,437	2,789

GENERAL SUMMARY

1. Number of organized community agricultural clubs in state	335
2. Number of community meetings held	1095
3. Number of county club meetings held this year for business purposes	140
4. Number of encampments or short courses held in state for instruction and recreation	24
5. Number of club boys sent to short courses or state encampments	154
6. Number of club boys entering college for the first time this year	83
7. Number of club boys sent to the State Fair this year	37
8. Number of club boys sent on other educational trips this year	7
9. Number of club shows and exhibits held this year	33
10. Value of prizes won by club boys on *crops*	$ 964.50
11. Value of prizes won by club boys on *animals*	$1968.25
12. Number of banks or individuals that loaned money to club boys to buy seed, livestock, etc.	29
13. Approximate total amount so loaned	$2407.00
14. Amount lost, if any, because of these loans	0
15. Number of boys who have their own bank account	201

Boys Club Marketing
Buying and Selling

Bought

Purchase Price	Local Price	Saving to Members
$201.50	$249.50	$58.00

Sold

Purchase Price	Local Price	Saving to Members
$611.40	$240.00	$173.90

Respectfully submitted,

C. R. HUDSON, *State Agent.*

REPORT OF THE DIVISION OF HOME DEMONSTRATION WORK

To the Director: There were 49 counties organized in home demonstration work in 1921 and detailed reports of work done in each have been received and compiled in the office of the state home demonstration agent. The reports are in full from all counties except Alamance, Pender, Person, Bladen, and Transylvania where agents were changed during the year and data was hard to obtain.

In spite of the financial conditi on of many county treasuries home demonstration work has had but ten counties to suspend operations and all but two asked to be reinstated in 1922.

With 59 counties reporting in 1920 there were 462 women's and 460 girls' clubs with a total enrollment of 18,498. Forty-nine counties reported in 1921 recording 539 girls' clubs with an enrollment of 8,452 and 544 women's clubs with an enrollment of 10,821. Add to this 108 community clubs with an enrollment of 6,097 members and there is a total of 1,191 clubs with a total enrollment of 25,370. These clubs furnished a total attendance at club meetings during the year of 146,646. The attendance at general and county-wide meetings is reported as 179,784. With this well organized piece of machinery the gospel of good homes and vitalized communities is carried to the rural districts of North Carolina. That the clubs are well scattered over the country is shown by the county maps sent in by each home demonstration agent.

Women's and girls' clubs are under the direct supervision of the home agent but community clubs, which embrace men, women and children, are organized through the joint effort of the farm and home agents.

The programs for community clubs include discussions and demonstrations in home and farm conveniences, and questions of marketing.

Community Betterment	Beautification of school grounds Beautification of church grounds Equipment of school Recreation (Plays and games) Amusements (Music dramatics) Sanitation Community fairs Promoting club work for girls and boys

It is through the community club that much of the co-operation of the extension division and the other state and county organizations can be effected. The clubs furnish the machinery and the county superintendent of education, the county health officer, the county nurse, the county welfare officer, and other supervisors of county work arrange with the county agents and club presidents to have a time and place on the program. The meetings are usually held at night and for the most part are held in the schoolhouse but here and there a community club has had the ambition to build a community house or to convert some building into a suitable meeting place. Ten community houses were built in 1921.

The Cabarrus county agent says: "Anything which is to be carried to the rural comunities is done through the community clubs. There are five in this county with an average attendance at meetings of 125."

In Rowan one of the club presidents brings the community together twice a month for song and play evenings. The attendance averages 100 men, women and children, practically all of whom take part. "The leader has developed from a timid little farm woman to a real live wire."

The Guilford home agent says: "There are six community clubs in Guilford County with a membership of 750 men, boys, women, and girls. Some of these clubs meet twice a month while others meet only once. In these clubs funds have been raised for needed purposes and entertainments have been provided for both young and old. Four community clubs got behind the community fairs this fall. Pleasant Union Club raised several hundred dollars for 1921 and bought a number of chairs for the community auditorium, installed lights, and built a stage. This stage has been used a number of times for community plays, etc."

WOMEN'S HOME DEMONSTRATION CLUBS

Programs for the 544 women's clubs include: health, food, gardening, beautifying premises, poultry work, dairy work, clothing, household furnishings and conveniences, household management, and income earning features.

Programs for the 539 girls' clubs include: cookery (care, selection and preparation of food), sewing (plain, dress design, home millinery), poultry, household furnishing, basketry, club encampment of boys and girls, and income earning features.

Enthusiastic interest has been shown in all of these programs as will be attested by the attendance. Not every club can compass all the subjects outlined in one year but each makes its selection and does its part in carrying out plans.

The health work was carried on through co-operation with the county health officer and the county nurse. The New Hanover agent reports:

"The county nurse and I planned county-wide visits to the rural schools where we weighed and measured the children. Undernourished children were given special attention by us through personal visits to the mother. We suggested remedial diets and gave a list of foods to the parents showing amounts needed by the child during the day. We also placed food charts in every rural school explaining food and its uses in the body."

NUTRITION

Work in nutrition was carried on in practically every woman's club.

In Davidson county where a new woman's club had just been formed, the members asked to have instructions in how to plan well-balanced meals and how to know the symptoms of malnutrition. They gladly bought copies of Rose's "Feeding the Family" and made it possible for the nutrition specialist from the State College for Women to come to them for a lecture on malnutrition. The result of this work is plainly to be seen in the health of the families and also in the efficient way in which these club members assisted the county agent in putting on a child feeding booth at the county fair. They weighed and measured children and talked with understanding of the proper diets to be given.

In 1921, 2341 demonstrations in the care, selection, and preparation of food with special emphasis on nutrition were given by the home agents. Nutrition booths, a detailed account of which will be given under fairs, were established at community, county, and state fairs. Better bread campaigns blessed North Carolina in 16 counties in 1921 and in 10 counties in 1920.

MILK

The great value of milk in the diet was taught not only at the club meetings but in seven county-wide and two city campaigns.

From the Cumberland Agent comes the following: "Although we may not be turning the world upside down accomplishing great things, some little incident makes us see that we are perhaps reaching the homes of the county in a way that will bear fruit in the next generation long after the home agent has gone to her reward. During my 'Drink More Milk' campaign I visited the rural schools of the county and talked to the children about the importance of drinking milk if they wished to grow into strong, healthy men and women. I told the boys their part in having this very necessary food was to care for the cow, grow good pastures, have a comfortable, clean stable for her feed her properly, and *do the milking*. Then I'd add, 'If you boys do all this and then do not have plenty of good milk and butter you can blame the girls.' Their part is to properly care for the milk in the home by straining at once, cooling as quickly as possible, washing all utensils properly, etc. I told the children of the fat, protein, minerals, and vitamines in milk and what each of these did in making our bodies strong and able to resist disease. I had attractive charts to illustrate and in every one of the 24 schools where I gave this talk I had the closest attention from the children.

The following letter was sent out preceding a milk campaign in an eastern county where cows are not as abundant as they might be:

"We want you to be present at the 'Dairy Schools' which are to be held at various points in New Hanover County. The North Carolina Animal Industry Division, the New Hanover Health Department, the New Hanover Board of Education, and the Farm and Home Demonstration Agents for the county cooperating.

"You cannot fail to appreciate the need for a more extensive use of milk as food when you realize that one quart of milk is equal in food value to any of the following:

8 eggs
2 pounds of chicken
¾ pound of beefsteak
⅘ pound of pork

"You will see from the program below that these meetings will be of immense value not only to the person who has a family cow but also to the dairyman as well. Come and give us your support in making the meetings a success.

Sincerely yours,
Florence Jeffress, Home Dem. Agent.
J. P. Herring, Farm Demonstration Agent.

"Program of Dairy Schools:

'Value of Milk in the Diet'.....Mr. A. C. Kimrey,
Animal Industry Division, Raleigh, N. C.

'Use of Milk in Cooking'.....Miss Florence Jeffress,
Home Demonstration Agent.

'Feed and Care of the Family and Dairy Cow'....Mr. A. C. Kimery,
Animal Industry Division, Raleigh, N. C.

'Pastures and Crops for Roughage'.....Mr. J. P. Herring,
Farm Demonstration Agent.

'The Relation of Milk to the Prevention of Disease' Dr. J. A. Hamilton,
County Health Officer."

City milk campaigns were held both in Winston-Salem and in Asheville, the Home Demonstration Division co-operating with the Division of Animal Industry. A representative from each division went to the town two weeks ahead of the campaign arranging the form of co-operation which the city organizations and the milk producers and distributors were so glad to give. The mayor, board of health, city school superintendent, chamber of commerce or board of trade, the woman's club, medical association, hospital officials and nurses, all joined with the extension forces to make the campaign a success. The campaigns were financed locally by interested organizations or individuals. After the preliminary work four additional demonstration agents came in for the week of the campaign. These agents, together with the one in charge, made talks to all the school children, both white and colored. and also to groups in factories, mills, and laundries, on the value of milk as a food.

In Winston-Salem 9947 people were reached directly. A survey was made of 5647 school children and it was found that 2198 received milk daily, 2123 drank no milk and 2427 drank tea and coffee. The health authorities who worked with the extension forces weighed and measured 1899 white children and found that 16 per cent were underweight. Similar records were made with 1806 colored school children and 15 per cent were found to be underweight. The average consumption of milk in Winston-Salem before the campaign was figured to be less than one-fourth of a pint per person per day. Accurate figures taken about two months after the campaign closed were found to show a 40 per cent increase in the consumption of milk for the city and in some cases a reduction in price as a result. A class of twenty underweights was used as follow-up work to show the value of milk in the diet. Each child was given one quart of milk a day. Records have not yet been received from this experiment.

PRESERVATION OF FOODS

In spite of the devastating drought of 1921 a good record was made in canning, preserving, etc. Reports state that 816,373 containers were filled with fruits, vegetables, meats, preserves, jellies, jams, pickles, fruit juices, etc. The estimated value of these products is $381,747.40.

No.	containers	filled	with	vegetables and fruits	600,310
"	"	"	"	jams, preserves, etc	72,193
"	"	"	"	jellies	31,866
"	"	"	"	juices	19,139
"	"	"	"	pickles	56,955
"	"	"	"	meats & meats canned with veg	7,574
"	"	"	"	soup mixture	14,864
"	"	"	"	vinegar	13,318
"	"	"	"	macedoines	154
				Total	816,373

One thousand one hundred and ninety four demonstrations in the preservation of foods were put on by agents.

HOME CURED MEATS

With the assistance of specialists from the Animal Industry Division, agents have given special instructions in curing meat to club women and girls. Home agents have assisted the specialists to demonstrate the making and cooking of sausage and other products at the State Live Stock Asso-

ciation and have also assisted with butter and egg grading demonstrations. The Sampson County agent says the pork cured by demonstration methods is fast gaining favor and since so many lost heavily the past year from spoilage through skippers, more are interested in proper curing.

In the following statistics much of the meat, lard, etc., was used at home but a big proportion was put upon the market.

No. lbs. pork cured by club members	2,106,931
No. lbs. sausage made	374,927
No. lbs. lard made	733,232
No. lbs. corned beef	300
No. lbs. Scrapple, head cheese, etc	85,960
No. lbs. soap made	30,739

CAMPAIGNS

The county-wide campaigns have been wonderful in opening the eyes of the unorganized sections of a county to the value of home demonstration work for women and girls. Forty-six of these campaigns were carried on in 1920 and fifty in 1921. These gave the home agent an opportunity to touch the whole county at least once a year and were the means of establishing the finest kind of co-operation with the schools, the churches, health officers, and other county organizations.

The following are the number and kind of campaigns held:

Bread	16	Home convenience	1
Milk	7	Housekeeper's week	7
Hot school lunch	1	Home and school improvement	1
Pressure cooker	2	County rallies	2
Grape	5	Beautification of premises	4
Dairy	1	Cooperative marketing	3

A report of the milk campaign was given under foods. The bread campaigns and housekeeper's week were dealt with in detail in the 1920 report; but the home and school improvement campaign for Iredell County, as one of the most successful ever held in the state, should be given special mention here. Beginning the first of February, it continued until May 30. The home demonstration clubs of the county, the teachers, the school children, all were interested in entering the contests. Prizes were offered:

To the community making the most improvement in its schools, homes, and grounds.

To the community installing the most electrical appliances.

For the most convenient kitchen.

For the most improvement in a one-teacher school, a two-teacher school, a three teacher school, and a high school.

To the teacher writing the best composition on "The Kind of Home I Expect to Have."

To the teacher writing the best story about the campaign.

To the teacher or teachers in a school arousing the most interest and securing the best results in the home convenience campaign.

To the school representing best the negative side in the final debating contest on April 23.

To the winners of the county-wide debate: "Resolved that the automobile and tractor are more necessary to the farm family than electric lights and power."

To the woman in the county writing the best composition on "Why Every Farm Woman Needs a Steam Pressure Cooker."

To the woman writing the best composition on "Why I Need Electric Lights and Waterworks in My Home."

To the man writing the best composition on "Is it Possible to Make the Average Farm Home More Efficient and How?"

To the man who writes the best composition on "The Results of the Home and School Improvement Campaign as I see It."

For the best paper on "The Value of the Tractor to the Farmer," written by any school boy or girl.

For the best composition on "What Convinces You that Electric Lights and Power are More Essential to the Farm Family than the Automobile and Tractor?"

To the school boy or girl over twelve years of age writing a composition on "How Electricity Improves Farm Life."

To the community club doing the most constructive work.

To the community subscribing to the most magazines and securing the most traveling libraries.

To the community reporting the most screened homes.

For the greatest number of dish drainers in a community.

To the housekeeper reporting the greatest number of inexpensive labor -saving devices for the home.

To the girl showing the best collection of government bulletins and cook books.

For the home showing the most improvement in beautifying the home grounds.

North Carolina Education says: "Observe the practical character and wide inclusiveness of these contests: the prizes worth working for, the subjects worth studying, the things worth doing; the business men giving prizes, the school children debating the question of modern outdoor motors for the men against indoor conveniences for the women; men and women challenged to write compositions on urgent matters of home improvement; teachers and pupils enlisted, schools enlisted, communities enlisted, just about everybody enlisted.

"In connection with the prizes for improvement of school grounds or home grounds, a well-known nursery company offered to make free landscape and planting plans for any school or home that would send the necessary data and kodak pictures of the premises. Several schools at once took advantage of this offer and immediately went to work. The two-teacher school at Elmwood was one of these. The whole community turned out for two days. Stumps were pulled, the grounds plowed, loads and loads of manure hauled, what the ladies call 'Lovely curving walks' were laid off, the grass sown, and shrubs planted under the direction of landscape gardeners. Then a few days later they came and painted the schoolhouse inside and out.

"A number of the community clubs are doing the same things. In one two-teacher community, thirty homes observed clean-up day. In another, four electric outfits were installed before the middle of March. The women all about are fixing up their rooms so as to obtain good results with moderate outlay. One resourceful woman enameled her furniture old ivory, made the walls a soft gray, and put flowered draperies at the windows—all at a cost of $18.62. These are but a few of the reports now in the making for the big day, May 30th.

"Children and grown-ups both went eagerly to work for the composition prizes. They began to swell Miss Henkel's mail about three weeks ago. One of the motor companies put on moving pictures in forty schools, showing a home without modern conveniences in contrast with one having them. At every meeting there was a talk on home conveniences. An expert electrician made a talk to all the county teachers on the most practical and economical method of installing water and lights. And practically all the children in the county are writing compositions on 'How Electricity Improves Farm Life.'

"But probably the county-wide debate on tractors and automobiles against electric lights and power has aroused more interest than any other feature of this county-wide contest. More than twenty-five schools enrolled for the debate.

"How deep and how lasting will be the good effects of this campaign upon the civic and domestic life of Iredell is something that may be better forecast when complete returns are gathered at Statesville on the fourth Saturday in May."

Money spent on improvements:

Amount of money spent by club members on home improvements	$20,192.00
Money raised in schools to purchase equipment	2,147.35
" " " " " " books	205.36
" " " " " " pictures	183.00

Clean-up Day:

No. of homes observing clean-up day	655
No. of schools observing clean-up day	57
No. of patrons contributing labor to improve school buildings and grounds	200

Other Improvements:

No. schools having school or community library	51
No. schools receiving community library	15
No. schools in which teachers endeavored to get children to drink more milk	39
No. schools in which floors were oiled	46
No. schoolhouses painted	13

Entrants in contests:

No. children debating "Resolved that the automobile and tractor are more essential to the farm family than electric lights and power	675
No. children writing compositions on "How electricity improves farm life."	262
No. children reading six books from school library	332
No. entrants in contest for home improvements	132

CLOTHING

The program in clothing includes plain sewing, dress design, millinery, remodeling, and home dyeing. There has been no abatement in the interest of women and girls in clothing work since 1920. Reports show 18,991 dresses, 8,147 hats, and 974 dress forms made. There were 7,157 garments remodeled and 1,370 dyed. Agents report these efforts to have saved to club members $105,140. Three dollars was the low estimate of money saved on each article. No estimate is made of clothing work done by women outside the clubs.

To carry out the clothing program, 21 dress schools and 42 home millinery schools were held in the counties. These lasted from two to five days and were conducted by the county home agents with the assistance of the assistant state agent, district agents, and neighboring county agents. The regular attendance at these schools was from 50 to 200 members. The following talks and demonstrations were given: the figure and its proportions, line and design, types, color, and making a dress form.

Individual women in the audience agreed to act as models and upon them were shown first dresses and hats of bad lines and bad colors; later, clothes of good design with lines suited to the figure and colors to the complexion of the wearer. The audience was called upon to criticize or approve and after a model was suitably dressed a prescription, as the club women called it, was given her, indicating the lines best suited to her and the colors she could wear best. On the prescription were pinned scraps of material showing the texture and colors selected. The great difficulty is in getting the time to serve all the eager models. These demonstrations are steadily increasing in the counties in which they have been started, and in the words of the Rowan county agent: "Our women and girls are beginning to realize that their former haphazard methods of buying and making clothes are not satisfactory."

New Hanover reports 650 dresses made by 100 women who also remodeled 150 garments. Reports from these women show a fair average of five dollars saved on a garment.

"The idea of making one's hats has spread faster than the whooping cough in this county," says the Northampton agent. "It is interesting to look around at county commencement and see the many home-made hats and note how favorably they compare with others."

Twenty five hundred and sixty six demonstrations in clothing were given by home demonstration agents.

HOUSEHOLD FURNISHINGS

Thirty counties report work in household furnishings. Five hundred and thirty nine club girls' rooms were improved and in 917 living-rooms the furniture was done over and artistically rearranged. The following description of a humble home in Franklin County will show some of the improvements made:

"It was our privilege to go through a four-room log house some time ago that showed every evidence of good taste and good housekeeping.

"The entire house was screened. Each floor was stained a soft brown and kept in good shape with a mop which the wife made. A little ochre had been added to the whitewash and instead of a glaring white the walls were cream. All the curtains were plain white scrim. In the sleeping rooms the furniture was enameled in white. In the living room there was one large soft brown rug on the floor. The mantel held a pretty plain clock and a vase or two. There were bright cretonne cushions on the chairs and window seat. A writing table and a built-in book case were made by the owner. There were a few potted plants and one or two pictures to brighten the room. One end of the kitchen which adjoined the living room was used for a dining room. A home-made table painted brown with cheap chairs stained to match were used here. The table cloth had been removed and a cream table runner with a stenciled border put in its place. A Christmas cactus in full bloom brightened the entire room. The serving table was made from an old wash-stand. This was used in carrying food from the work table. The kitchen was arranged for the convenience and comfort

of the housewife. The stove had a large reservoir. A small galvanized sink, painted white by the man of the house, was installed under a window. The drain pipe from this ran under the ground into the garden. A large barrel outside the window furnished water to the sink. This barrel is filled each morning by one of the older boys, thereby saving hundreds of steps and strain on the mother. This simple water system cost $7.50. The owner expects to install a pump later and send the water to the barrel by a hose.

"The home-made work table is on common bed rollers. This enables the owner to move it to suit her convenience. There are two built-in cabinets near the stove for china and cooking vessels. A low rocker, home-made stool, and several shelves complete the furnishings in this convenient little kitchen. The entire furnishings for this home cost less than $300. Yet it is a beautiful home with the true home spirit."

No. IMPROVEMENTS REPORTED IN THE HOME

No. washing machines purchased	201
Water systems installed	243
Lighting systems installed	475
Heating systems	81
Kitchens screened	1313
No. kitchens rearranging equipment	827
Floors finished	1871
Walls finished	2027
No. houses screened	2839
Girls' rooms improved	538
Living rooms improved	917
Fireless cookers bought and made	617
Kitchen cabinets	219

THE HOME DAIRY

Twenty-six counties report 8,679 cows kept by demonstrators and club members with 296 of these purchased through the influence of the home agent.

No. lbs butter made	1,318,861
No. lbs. butter sold	572,532

The big work of the Home Demonstration Division will be found in the campaigns for the use of more milk and the demonstrations showing the value of milk in the diet.

POULTRY WORK

Poultry work has been carried on in 25 counties by the home demonstration agents in co-operation with Mr. A. G. Oliver, state poultry club specialist. Mr. Oliver visits these counties giving instructions to the club girls and boys and coaches the agent. She in turn sees that instructions are carried out and reports made. In some counties the farm agent takes charge of poultry work and in others home and farm agents do it jointly. At the State Fair five counties sent teams of boys and girls to judge exhibits and to give the reasons for certain decisions. It was one of the most popular features of the poultry department. The detailed report of poultry work will be

found in the records sent out by Mr. A. G. Oliver, but the following figures are given here to show some of the results:

No. demonstrators purchasing standard bred eggs	1529
No. dozen standard eggs purchased	6001
No. demonstrators using incubators	239
No. demonstrators purchasing baby chicks	267
No. demonstrators using brooders	332
No. demonstrators purchasing standard bred breeding stock	629
No. standard bred chickens purchased	2112
No. poultry houses built	231
No. poultry houses remodeled	175
No. flocks culled	658
Total No. in flocks	51,827
Total egg production (11 counties reporting)	368,366 doz.
No. egg circles	81
Total No. standard bred chickens raised	45,922

The experience of a Stanly County club girl who was not satisfied with the common run of chickens is interesting:

"Now I wasn't satisfied. I wanted to have better chickens than Mama but how was I to do it? Now just listen. The best of luck came to me. Miss Keller, our Home Agent, got Mr. Oliver to come to our school and talk to us about poultry. He told the very things that I had been wanting to know and gave me a new case of chicken fever, and believe me, I was so carried away that I gave Mr. Phillips, our Farm Demonstrator, an order for three settings of pure bred Rhode Island Red eggs at $2 per setting.

"I selected three gentle hens and had them ready to receive the eggs when they came. I let the eggs set for 48 hours before I put them under these hens. These eggs were as precious as if they were gold and I gave my hens the best of attention and everything went just right until six days before I expected the eggs to hatch. Don't you think a bad little cousin of mine came to our home and scared my old hen off of the nest, threw the eggs on the ground, and broke them! Talking about getting mad, I was so hot it was dangerous for me to go near the fire.

"My other hens hatched 28 chickens out of 30 eggs. Now they were the sweetest little things that you ever saw. I had two of Mr. Oliver's kind of coops with the floor covered with sand ready to receive my chicks. I followed Mr. Oliver's and Mr. Phillips' advice in feeding and caring for my baby chicks. I first fed them mashed boiled eggs, shell and all. They soon learned me and would get in my lap and on my shoulder when I fed them. One died with the roup and one with full crop. The remaining 26 grew almost like magic. I carried a pen of them to Oakboro and New London Community Fairs and they won first prize at each fair.

"Mr. Phillips sold four cockerels at $1.50 each. This paid for my eggs. I still have 13 pullets and 9 cockerels. They are the pride of our farm and it is a pleasure to care for them.

"My poultry is so much better than Mama's that she wants me to stock the farm.

"May I add that I will soon have a poultry house built and I intend for my poultry to have the best of attention, and I believe they will think enough of their little mistress to send her through school.

(MISS) DOLLETTA BOST,
Rt. 6, Albemarle, N. C."

MARKETS

Club women and girls have been successful in marketing poultry, poultry products, butter, canned goods, baskets, rugs, etc. Curb markets for the sale of club products have been opened in Washington and Elizabeth City and are operated each Saturday. In Anson County a commodity exchange was instituted for the benefit of town and country women. 200 women sell products on the open market and 57 sell through the parcel post. Dressed poultry amounting to $2,119 was sold by post. The fowls were dressed properly for market, wrapped in muslin, and shipped in paper cartons. The rural postman delivered the package to the post-office and in the shortest time possible these perishables were delivered to the purchaser. Fifteen women shipped enough poultry to Raleigh between November 1 and March to bring from $1200 to $1500.

Anson club women sold also 4220 pounds of jam to the State College and 5000 cans of vegetables to merchants, reserving 13,000 cans for home use.

Northampton reports one club girl who supplies a millinery store with baby caps and another who bakes bread twice a week and supplies a small village.

Sampson reports the marketing of butter to special customers because of its standard pack and its good quality. "I am trying," says the agent, "to get the merchants to co-operate with us by referring to me for instruction women who bring poor butter for sale."

The market for canned products has continued good since an early reputation for putting up standard packs was earned by club members. Always the demand for club products is more than the supply and particularly has this been the case in 1921 when drought cut short the vegetables and fruits. Reports show sold from 7 counties 76,156 containers of fruits and vegetables and 1295 quarts of jellies, jams, etc. Seven counties report 2697 quarts of fruit juices, syrups, etc. sold.

The aggregate of 1,251,002 pounds of cured meat, lard, etc., is reported sold and 572,532 pounds of home-made butter has been marketed by club members.

The report of poultry and poultry products sold will be found in the report of the poultry specialist.

BEAUTIFICATION OF THE FARMSTEAD

The beautification of the farmstead has been undertaken as a project in many home demonstration clubs. Directions are given for base plantings after simple plans have been discussed for individual cases. In several instances blue prints of home grounds were furnished by the U. S. Division of Horticulture and Pomological Investigation and in others by landscape designers who were interested in the work. The use of native trees, shrubs, and plants was demonstrated and before blue prints were given the owner of the home agreed to carry out plans and follow directions that his place might serve as a demonstration center for the community.

At club meetings a plant exchange was established at the proper seasons and plants, seed, shrubs, and trees were transferred from one farm to another. The Anson home agent says: "In March I gave lectures on beautifying the home grounds and had each club member bring plants to exchange with her neighbor at meetings. This was carried on for six weeks and I never visited a place that I did not bring back some growing plant or shrub to give to some one who needed it."

The following comes from the agent of Gaston County, a county of a hundred cotton mills:

"All spring we had been talking beautification of premises and growing gardens. As soon as the weather permitted, work began in earnest. Many of the mills furnished seeds and bulbs to any and all of their employees who would plant and take care of them. The local paper carried notes on the subject and as a result more than one weary tourist will remember bright spots along the way. The results were often not in keeping with landscape gardening but at any rate the places looked much better than weeds or bare ground would have looked. In many of the newer mill villages woods dirt had to be carried for more than half a mile before anything could be induced to grow."

FAIRS

A fair can be made the best kind of community school and the demonstration agents have not been slow in grasping this fact. A product properly grown, properly graded, and properly exhibited speaks very loudly in favor of good methods when the judge awards the blue ribbon and publicly explains the reasons. A live demonstration of how to bake in an oil stove gives an added interest to the display of biscuits which have scored because of proper baking and to have a demonstrator actually make a dress form and fit a dress thereon before a community fair audience never fails to convince a woman that the prize winning dresses displayed are possibly within her power to make.

It is in the Home Demonstration building at the State Fair that an opportunity is given to demonstrate to the communities as well as to the counties the different phases of work for women. No one community fair could put on all the demonstrations staged here but almost anyone can arrange a convenient kitchen and get two or three good club women to demonstrate the making of bread, the use of the dish drainer, or how to prepare a well balanced meal for the family.

No Midway "Speiler" could have drawn the crowd more surely than did the appetizing odors coming from the kitchen booth at the State Fair. There were always men and women pressing close to the rail to watch the turning out of a piping hot roast from a pressure cooker or to see an angel cake done to a turn slip from the fireless cooker. There were questions about what to eat and how to prepare it and "Why does not my county have a home demonstration agent?"

There were ten booths lining the walls of the Home Demonstration building and in them, two to a booth, were twenty home demonstration agents doing their best to disprove the assertion, "It is no use trying to give instructions to a fair crowd; it will not stand still long enough."

No one could doubt that they had succeeded could he have seen the people around the home dressmaking and millinery booth who made it evident that they had come and come to stay until they had heard the last word about the fat woman who was first shown to them dressed as no fat woman should ever dare to dress and later was shown in a dress of good lines, becoming texture, and color which hid or disguised her bad points and did much to bring out her good ones.

At the nutrition booth the most popular demonstration was weighing and measuring both adults and children and noting those out of the normal. It was gratifying to see the absorbed interest and the eagerness with which the suggested diets for improvement of conditions were received.

Further along the line was the laundry booth. Here was contrasted the modern and the ancient way of doing the family wash; and demonstrations of how to set colors and how to remove stains were given as well as demon-

strations in how to use modern appliances. These demonstrations held an audience which blocked the aisle.

Even the commercial grape juice people lingered at the grape product booth where clear muscadine grape juice was exhibited and the method of making explained.

It was the use of the thermometer and the scientific test of juice for pectin that caught the attention and proved to the people that haphazard jelly making was unprofitable and unnecessary.

A chicken properly dressed for market next to an improperly dressed one taught the lesson of standardizing products offered for sale as did the standard cartons with graded and ungraded eggs. Both the poultry and the dairy booths stressed the home marketing side as the rural housewife in so many instances adds to her income through her butter, eggs, and poultry.

Carrying on the income earning feature, a small loom for rug weaving was operated by the home demonstration agent whose club women had been successful in making and selling rag rugs. In the same booth demonstrations of basket making were carried on, the materials used being our own native pine needles, honeysuckle, etc.

The booth showing an artistically arranged living room and bed room where old fashioned furniture was used was perhaps one of the most popular at the Fair.

That these things were carried back to the communities is proven by what an agent has to say of an interior decoration booth at a community fair which the home demonstration club women had themselves arranged. "They were very proud of it," said the agent, "and one of the women was so afraid I might miss some of the good points that she took me around calling my attention to the color harmony, the placing of the rug, the furniture arrangement, particularly did she emphasize the fact that the pictures were hung with two wires and two hooks." In explaining she used such words as balance and harmony and almost quoted from a lecture on household furnishings which she had heard at the Farm Women's Convention.

One of the district agents says, "When it comes to arousing community interest and pride there is nothing which will accomplish this more thoroughly than the community fair." At these fairs all of the judging is done in the open. The people are interested in knowing why decisions are made; and as only women trained in judging are asked to act, it is not hard to give reasons. Score cards are used in all judging and as the poorer products are eliminated the audience gathers close to note the scoring from point to point. A clear explanation never fails to satisfy and many an exhibitor goes back with a knowledge that brings her to the fair a prize winner next year.

In exhibiting at the fairs, the home demonstration club women have gone from fruits and vegetables to the making and exhibiting of the more difficult jellies, jams, and pickles and later to beautiful packs of meat, game, chicken, sausage, etc. All of these women have learned to do commercial packing and the displays at the fairs have done much to advertise the fact that the rural women can put upon the market a standard product which will rank with the best grades of commercial products.

In 1921 one hundred and four community fairs were held in North Carolina. Those in a large measure fed the 28 county fairs and the state fair recruited from all.

ENCAMPMENTS

The girls' and boys' encampments are indispensable to club work. It is the event looked forward to during the whole year and is the only outing many country children have. Some club work instructions are given the boy or girl but it is the recreational feature that is stressed. The county farm and home agents have held twenty camps this year with an attendance of 1398 girls and boys. For the most part, camps are held where there is a running stream, a lake, or at the seaside, though many successful ones have been carried on without the learn-to-swim feature. Fishing clubs, country clubs, well situated schoolhouses, have all been turned over to the agents for the use of the boys and girls, and at several camps tents have been used successfully.

The largest camp was held in Sampson county with 240 boys and girls enrolled for the entire time, 600 coming for part of the time. The agent says:

"Local leaders from each club, one man and one woman, together with the agents, worked out the details of the encampment plans. These local leaders had entire charge of their clubs, the men supervising the boys and the women the girls. We found this plan worked well. There was one man cook but the other work was done by club members and local leaders. It was so well planned and systematized that the work accomplished with the effort put forth was no less than marvelous. The clubs vied with each other to see which could serve the best meals; and it was wonderful to see vegetables, chicken, delicious sandwiches, iced drinks, cake, peaches, etc., served in sufficient quantity and on time for the large number when there was so little equipment for serving. At 6:30 the bugle sounded, when every one arose, dressed in a bath suit, and took his morning exercises. After this there was an hour for swimming in the lake. The bugle brought everybody again to the tents to dress for breakfast. Different squads helped with the meals each day. At the signal for breakfast every one lined up, the food was placed on a long table, and the crowd was served cafeteria style."

GIRL'S SHORT COURSES

In addition to the twenty county encampments at which short courses were held for girls, a state short course for prize winners was given at Peace Institute, Raleigh. Seventy-five club girls attended. The club institute is a reward for good club work and it is hoped that every organized county can send at least two representatives. The work done is not only educational but social and recreational.

ANNUAL SCHOOL FOR HOME DEMONSTRATON AGENTS

The annual school for home demonstration agents was held at the State College for Women, Greensboro, 54 women attending. A two weeks course was given to experienced agents in costume design, landscape design, advanced work in jelly making, pickling, and the canning and packing of meats. The newer women's schedule included millinery and the commercial packing of fruits and vegetables in addition. The daily conferences, one and one-half hours in length, gave the time for discussion of programs, plans of work, and co-operation with the farm agent. Details of the conduct of this school, as well as of the girls' short course, will be found in the 1920 report.

NEGRO WORK

Negro work was put on the annual budget of the Division of Home Demonstration work and the appropriation made in July. It seemed wisest to defer beginning work until the first of the year and plans have been made for placing colored agents in five counties at that time. These agents will act as assistants to the white home demonstration agent and be in charge of work for negroes.

During the year help has been rendered the colored people wherever the home demonstration agent could find the opportunity. Many of these agents have given food conservation, and clothing demonstrations to the colored as well as to the white people. They have also included the colored people in the city and county campaigns for the use of more milk.

White agents have assisted not only in planning community, county and state fairs but have acted as judges whenever assistance was desired. The colored state fair followed the white fair and the Division of Home Demonstration Work turned over to selected, well trained colored women its own special building with all its equipment for carrying on demonstrations in housewifery. These women in charge consulted with the home demonstration agent as to the kind of demonstrations and the manner of carrying them out and put on a most creditable exhibition.

ADMINISTRATION

That the relations of the home agent with other state agencies may be harmonious, the state agent of home demonstration work confers with heads of state departments as to policies to be carried out in the counties. Home demonstration headquarters are at the capital, as are those of all state departments, and there is the finest kind of co operation of forces looking toward the elimination of duplication in state work.

Programs of co-operative work for the home agent and the different divisions of extension work are planned by the state agent and the head of each division before passing on to the district and county agents. Some particularly good plans have been worked out through the Division of Animal Industry and the Home Demonstration Division.

The monthly meetings of the men and women state and district agents with the Director of Extension have made it possible to co-ordinate the work of the farm and home agents more closely. At the January meeting the specialists are called in to arrange yearly programs that will fit in with the farm and home agents' plans of work.

Co-operation has been maintained between the State College for Women at Greensboro and the Home Demonstration Division. This college furnishes laboratories, dormitories, and part of the faculty for the annual school for agents, puts on a winter short course in home economics for agents desiring it, and invites the State Home Economics Association to hold its annual meeting at the college.

There is a very satisfactory understanding between the Smith-Hughes home economics head and the head of home demonstration work. The home demonstration agent, in point of service being the senior state home economics worker, invites for a conference the Smith-Hughes home economics head together with the head of the department of home economics at the State College for Women. At this conference plans of co-operation are made and the best of understanding exists. The conference has become an annual event and a smoothly running state machinery results.

The state agent served as president of the State Home Economics Association in 1921, was on the board of the U. S. Training Camp for Women, and was state director for the General Federation of Women's Clubs to outline a policy of co-operation between town and rural clubs. This last office furnished an opportunity for the appointment of interested town club women to co-operate with home demonstration agents.

The state agent, with her assistant and the district agents, have frequent conferences with county boards of education, county commissioners, welfare officers, county health officers, dietitians at state and private institutions, physicians regarding nutrition and diet, architects regarding home economics department plans, writers of magazine articles, newspaper reporters, men and women wishing to go into the canning or trucking business, and many private individuals.

In 1921 the state agent paid 25 visits to counties conferring with the agents, visiting county boards, and making talks at county meetings. She gave also a series of three lectures on home demonstration work, its organization, plans, and the results, before a conference of southern Methodist rural ministers at Junaluska, North Carolina. Those lectures were for the purpose of informing the rural pastor of what was or might be done through organization in the county and to enlist his sympathy and co-operation in this particular kind of community work. Talks were also made by the state agent at the Country Life Association meeting at New Orleans, at the meeting of the American Home Economics Association at Swampscott, at the state meeting of Business and Professional Women and before the Council of the State Federation of Women's Clubs.

Installation of Home Agents

Very definite plans are made for the installation of a home agent in her territory. District agents announce the time of arrival to the local county council if there is one, to the woman's club, and to the church people. The farm agent is notified and also the county superintendent of education. If possible the district agent is at the county seat to welcome the agent and to get her well established in a comfortable home, realizing that to do efficient work an agent must be happy in her home life. The county superintendent of education and the farm agent are visited next day and co-operative plans of work are talked over. The agent's office is usually in the court house, 43 of the 49 agents being so housed. As early as possible the home agent is introduced to the county commissioners and to the board of education. Arrangements are made about a car and the assistance of the farm agent and the school supervisor secured in pointing out roads and club centers. Cars are owned by the Division of Home Demonstration Work in 43 counties.

Social and professional affiliations are most important if the home agent is to take that position in the county which is expected of her. That she has become a leader is evidenced by the number who have, in addition to their rural work, taken the chairmanship of the home economics department or been presidents of the most important women's club in their counties. Records show that 29 county agents and 5 of the state staff have held these positions or have made the programs for the home economics department during the last two years, thus doing much to make themselves leaders of home economics thought in the counties. One of the staff is home economics chairman of the State Federation of Woman's Clubs, succeeding a county agent who held the position for two years.

County Cabinets

To insure the coordination of all county workers, ten counties have formed what is called in one district a county cabinet. This organization of county heads of organizations meets once a month. The former home agent in Johnston County says: "As a result of this organization all of us were able to work more intelligently. The bulletin board telling where we were each to be during the week enabled some of us to make trips together and to help each other in many ways."

County Councils

Twenty-nine counties have county councils composed of delegates from the home demonstration clubs. These average 27 members. Councils meet monthly in the home agent's office, report on the work in women's, girls', and community clubs and help plan the program for the year. They are behind the agents in any work outlined and go before the county boards to express the county sentiment when work or fiances are discussed.

Home Bureau

These women are also active in rounding up the county clubs into a home bureau or federation of home demonstration clubs. Eleven of the counties formed the State Federation of Home Bureaus in 1920 which had its first annual meeting in August 1921 at the State College of Agriculture and Engineering, Raleigh, during the Farmers' and Farm Women's Convention. Much interest has been shown in enlarging the membership to take in all organized counties.

STATE AGENT'S STATISTICS

Miles traveled, 6720; talks given at meetings, 83; attendance, 7136; conferences, 408; letters, 2389; circular letters, 1241; collaborated with district agent preparing 2 bulletins.

ASSISTANT STATE AGENT'S STATISTICS

Miles traveled, 8183; meetings attended, 239; attendance, 23,622; agents visited, 54; letters, 826; circular letters, 1200; bulletins, 140; conferences, 512; teachers and leaders interested in milk campaigns, 352; 1 bulletin written entitled "Milk for the Whole Family."

DISTRICT AGENTS' STATISTICS

Miles traveled, 32,497; meetings attended, 508; attendance, 36,293; agent visited, 202; letters, 3617; circular letters, 870; bulletins, 631; conferences, 2302; number articles prepared for publication, 69.

COUNTY AGENTS' STATISTICS

Miles traveled, 241,558; meetings attended, 7,259; attendance, 321,886; conferences, 33,806; letters, 51,441.

COUNTY STATISTICS

County	Number Clubs Women Girls Community	Enrollment	Attendance	Number County Councils	Number Fairs or Exhibits	Number Demonstrations—Food	Number Demonstrations—Clothing
Alamance	.....	.....	187	.....	3	.....	5
Anson	47	310	27	1	.....	20	120
Beaufort	14	328	1,125	1	2	40	25
Bladen	14	183	.....	.....	.....	.....	.....
Brunswick	17	309	1,751	.....	1	49	53
Buncombe	24	90	.....	.....	6	37	43
Cabarrus	20	817	1,720	.....	8	29	30
Catawba	25	565	2,764	.....	5	43	72
Cleveland	43	523	4,466	1	4	156	40
Columbus	21	434	.....	1	.....	2	26
Cumberland	13	304	1,612	1	.....	6	44
Davidson	26	582	1,549	.....	5	35	45
Durham	39	472	6,171	1	.....	45	38
Forsyth	28	450	5,751	.....	7	555	275
Franklin	17	56	8,028	1	5	40	50
Gaston	3	1,150	720	1	2	.....	.....
Granville	.....	.....	.....	.....	.....	.....	.....
Greene	12	224	1,256	.....	.....	20	50
Guilford	21	1,049	6,615	1	5	45	53
Halifax	22	504	6,850	.....	3	225	50
Harnett	18	275	2,718	1	1	60	41
Hertford	27	994	.....	1	3	65	50
Iredell	17	423	3,572	1	2	.....	.....
Johnston	19	377	4,689	1	2	49	82
Lee	22	234	.....	.....	4	.....	.....
Lincoln	55	500	2,350	.....	1	225	12
Madison	10	242	2,600	.....	2	.....	.....
Mecklenburg	24	818	5,298	1	9	50	65
Moore	38	1,674	8,778	.....	9	126	16
Nash	17	255	4,696	.....	4	95	45
New Hanover	15	327	.....	1	.....	35	30
Northampton	20	486	2,808	1	1	18	63
Onslow	28	745	2,060	.....	.....	26	.....
Pasquotank	30	445	6,760	1	.....	100	50
Pender	14	240	900	.....	2	36	20
Perquimans	17	241	4,295	1	1	53	30
Person	.....	.....	1,536	.....	.....	.....	.....
Richmond	28	335	700	1	3	.....	.....
Robeson	78	1,000	4,707	1	3	75	50
Rockingham	24	691	4,917	1	5	57	13
Rowan	20	782	3,981	1	3	4	220
Rutherford	8	370	160	.....	12	550	200
Sampson	24	450	500	1	8	28	40
Stanly	25	447	8,235	.....	1	100	50
Transylvania	32	316	1,950	1	3	.....	.....
Vance	24	750	2,080	1	4	110	26
Wake	36	465	6,307	1	.....	.....	.....
Washington	20	750	3 764	1	3	52	20
Wayne	33	1,238	1,850	1	7	145	124
Wilson	22	850	4,700	1	.....	70	200
Total	1,191	25,370	146,646	29	149	3,535	2,566

FOOD CONSERVATION STATISTICS

County	Number Containers Fruits and Vegetables	Number Cans Meat	Number Containers Syrup and Fruit Juices	Number Pounds Sausage Made	Number Pounds Meat Cured	Number Pounds Lard
Alamance						
Anson	15,200		1,000	600	3,000	1,000
Beaufort	22,860		4,480			
Bladen	5,560		127			
Brunswick	12,600		150			
Buncombe	6,000	1,630				
Cabarrus	25,200		50			
Catawba	2,485					
Cleveland	18,692		372			
Columbus	675			1,500	3,200	2,150
Cumberland	8,823	62	200	5,568	50,475	
Davidson	69,000					
Durham	6,731	2,160	25	1,000	2,567	2,000
Forsyth	3,350		150	150	300	100
Franklin	10,457	150				
Gaston	4,930		128	500	2,325	800
Granville						
Greene	5,100		25		600,000	200,000
Guilford	21,051			12,095	69,120	15,336
Halifax	10,576		350			
Harnett	900					
Hertford	6,915		1,248	14,698	156,568	27,34
Iredell	11,508		368	2,610	28,998	4,310
Johnston	8,993	595	47	17,812	172,247	27,250
Lee	3,629	20	24	1,575	19,500	2,863
Lincoln	23,000	144	6,000	1,000	100,000	20,000
Madison	338		18			
Mecklenburg	27,970		200	141,600		201,000
Moore	66,000	1,400		500	14,000	2,200
Nash	5,150	20		250	3,000	1,250
New Hanover	9,190		68	125	3,500	570
Northampton	4,626		5	8,150	65,500	11,400
Onslow	362	5				
Pasquotank	8,850		225			
Pender						
Perquimans	4,700		50	,820	66,560	11,506
Person						
Richmond	24,610		1 0	2,000	30,000	5,000
Robeson	5,200		500			
Rockingham	2,543	260	9	1,076	18,077	
Rowan	1,000	200				
Rutherford	20,167		850	1,413	14,300	4,290
Sampson	8,00	95	100	1,500	12,000	1,000
Stanly	3,150		275			
Transylvania						
Vance	10,750	250	300	5,000		700
Wake				39,064	184,044	62,208
Washington	51,000		300	600	200,000	10,000
Wayne	21,770		1,200	109,720	287,650	18,765
Wilson	19,900		150			
Total	600,311	7,574	19,139	374,927	2,106,931	723,232

Total number containers jellies, pickles, preserves, soups mixtures, vinegar, and macedoines.189,350
Grand total, 816,373.

IMPROVEMENTS IN HOMES

County	Rearrangement Kitchen	Kitchen Conveniences	Fireless Cookers and Steam Pressure Cookers	Improvement in Floors	Walls Improved	Screening
Alamance						
Anson	10		8		6	10
Beaufort	7	6	60	27	12	40
Bladen						
Brunswick	3	2		2	3	20
Buncombe	8	4	34	27	8	
Cabarrus				4		6
Catawba	10		3	28	3	18
Cleveland	51		75			36
Columbus	3			13		15
Cumberland	71		11	73	81	48
Davidson	7		18	14	25	30
Durham	27	4	45	28	10	8
Forsyth	7	25	7	27	16	25
Franklin	10		3	15	15	100
Gaston	7		6	73	69	140
Granville						
Greene			3			
Guilford	101	10	10	76	71	200
Halifax	10			14	6	10
Harnett						
Hertford	10		2	186	161	400
Iredell		3	5	86	47	242
Johnston	17		16			143
Lee	10	2	4			27
Lincoln	25	15	55	40	20	100
Madison	3		1	4		16
Mecklenburg	70	15	57	205	950	422
Moore	100	36	11	141	50	120
Nash	4	6	3	22		13
New Hanover	60	18	150	103	100	50
Northampton	17		5			32
Onslow			4			57
Pasquotank	50	150	52	300	150	250
Pender	6					
Perquimans	5		3	31	31	21
Person						
Richmond				50	38	30
Robeson						
Rockingham	11		9	85	33	39
Rowan						
Rutherford	60	4		60	20	50
Sampson	10	10	6	50	10	8
Stanly	15	5	6	10	15	25
Transylvania						
Vance	4	3	26	30	10	25
Wake						
Washington	10			10	2	6
Wayne	3	236	8	11	15	14
Wilson	5		15	26	50	25
Total	827	543	721	1,871	2,027	2,839

IMPROVEMENT IN HOMES AND YARDS

County	Water Systems Installed	Light Systems Installed	Heating Systems Installed	Washing Machines	Other Laundry Equipment	Lawns Planted
Alamance						
Anson	6	3		3		
Beaufort	5	15				
Bladen						
Brunswick						1
Buncombe	3	2	1	5		2
Cabarrus	5	4				4
Catawba	3	3		7		
Cleveland	2	2				
Columbus	2	2				
Cumberland	7	12	2	11	10	7
Davidson		8		1		15
Durham	2	3	1		8	2
Forsyth	6	12	2	2	10	7
Franklin	2	2	2	1	1	2
Gaston	5	6	2			
Granville						
Greene						1
Guilford	10	10		5	2	50
Halifax						
Harnett						
Hertford	8	25		8	213	
Iredell	38	148	2	4	2	15
Johnston	4					
Lee		5	1	3	13	2
Lincoln	12	12		6	12	50
Madison					2	
Mecklenburg	25	33	25	8		
Moore	44	55	23	18		12
Nash	2	5	1	5	58	3
New Hanover	15	35	2	13	21	33
Northampton						
Onslow						
Pasquotank		7		25	250	
Pender						
Perquimans	2	2		2		6
Person						
Richmond				4		
Robeson						
Rockingham	2	9		23	55	7
Rowan						
Rutherford	5	8		7	4	10
Sampson	10	15	5	1	2	5
Stanly						
Transylvania						
Vance		15	8	10	8	12
Wake						
Washington	3	2				
Wayne	15	15	4	20	25	3
Wilson					16	
Total	243	475	81	201	712	249

Respectfully submitted,

JANE S. MCKIMMON, *State Agent.*

REPORT OF THE DIVISION OF AGRONOMY

To the Director: Although the past year has been a rather difficult one with the agronomy extension work, it is felt that much progress has been made. The activities of the division have been mainly along the lines reported on below:

SOIL AND CROP EXTENSION WORK

The soil and crop activities during the past year have been along the line of soil improvements, including the proper use of fertilizers, lime and legumes; the use of crop rotations that will facilitate soil improvement and also help the farmer to grow more food and feed stuffs for home use; and the improvement of crop yields by the selection and use of properly field selected seed of different crops.

The fertilizer situation during the past spring was a trying one as prices for mixed fertilizers had fallen very little in comparison with the marked decline in the market price of farm crops. As far as practicable, we encourage farmers to utilize waste materials on the farm and to buy fertilizing materials where they were cheaper and do their own mixing. In some cases this was a decided advantage to farmers. Farmers, too, have been advised as to the best amounts and proportions of fertilizer to use on different crops grown under different conditions. In making these recommendations, the extension field men have been guided by the results secured from the experimental work of the division.

The extension men encouraged a reasonable reduction in the acreages of cotton and tobacco last year, and in the growing of legumes in their places. To facilitate this work, county agents were supplied during the early spring with up-to-date information as to the price of soybeans, and where they could be had. As a result of this effort, large quantities of seed beans were bought and used by farmers for planting purposes in sections of the state where beans had been grown but little before. In one county alone, 900 bushels of soybeans and cowpeas were planted this spring. This county three years ago was practically unacquainted with soybeans and grew but a small acreage of cowpeas. The acreage of all legumes appears to have been increased over all the state during the past year. The division has urged upon farmers the importance of a permanent system of agriculture in our state; one that will build up the productiveness of our soils rather than one that will bring depletion of our soils. Work along the above lines has been carried on by the extension agronomist in 30 counties with county agents and teachers in farm life schools. The average attendance at meetings has been fairly good and the interest splendid.

Some time has been given in making talks at general farmers' meetings and in judging at county fairs. A large number of timely articles, too, have been prepared and sent to county agents and to newspapers of the state.

Field Demonstrations

Early in the year, requests were received for field demonstrations to show the value of crop rotation, lime and legumes in relation to soil fertility building. Outlines were prepared and plans were perfected for carrying out these demonstrations in a number of communities. Successful demonstra-

tions were carried through in Alexander, Stanly and Union counties. These demonstrations were designed to show the effects of lime on legumes, and the value of plowing under a growth of legumes upon the crop following. Wherever demonstrations have been carried out they have aroused considerable local interest among the farmers. During the past fall, field meetings with farmers of the community were held on the different fields to study the effects of lime upon crops grown. Marked effects were shown the first year in all cases on the growth of soybeans. It is planned to hold field meetings at each of these fields during later stages of the demonstrations. It is hoped that conditions will permit the rapid extension of this work to other communities of the state.

EXTENSION WORK IN CROP IMPROVEMENT

The crop improvement work has dealt with the improvement of seed and of cultural methods of cotton, soybeans, wheat and rye. All of the work has been done with the community as a basis and in cooperation with county agents. The seed improvement work has consisted of established improved strains bred and grown by the experiment station and other careful breeders.

Community Cotton Improvement

During the past season, help has been given to seventeen communities that have chosen one variety of cotton and are now doing plant-to-row cotton breeding. These communities have received help in planting their seed patches in the spring and selecting good plants in the fall. As a result of this and previous work, these communities have saved 22,600 bushels of improved seed this past season. Other communities that have chosen one variety for the community but are not practising seed selection will save more than 200,000 bushels of seed from improved strains of cotton this season. The cotton improvement work has extended to thirty-two new communities in twenty counties during the past season. This new work has consisted of variety tests to determine the variety best adapted to the different communities. In a majority of these tests, the Mexican Big Boll, bred by the experiment station, and the Cleveland, bred in cooperation with the growers of the state, have yielded best. This limits the new introductions in the state to two new varieties. At the beginning of the community cotton improvement work in 1914, more than 90 per cent of our production of cotton came from the small boll cottons belonging to the King or Simpkins group. At the present time, more than 60 per cent of our crop comes from improved varieties recommended by the extension service. In field tests, the improved strains have averaged 116 pounds of lint per acre more than the best unimproved varieties grown in the state.

Community Corn Improvement

Fourteen communities in eleven counties have received help in the selection of their seed corn. This work has consisted of field demonstratons in the selection and saving of good seed corn from improved strains. Eleven communities of eight counties have been helped in the testing of corn varieties in the community. These communities have agreed to grow the variety which yield best and will further improve it by selecting seed in the field each year. In the community corn improvement work, one finds a larger number of growers selecting seed corn than with cotton. In communities where one or more growers have been saving seed corn from a standard variety, it has not been advisable to introduce a new strain. In many com-

munities it will simply be a matter of establishing the best variety that has been previously selected in the community. The results from the Cherryville community test in 1919 is a good illustration. Only one grower, Mr. Kiser, of the community had been selecting seed each year. In this community thirteen growers furnished seed for the test. When this test was completed Mr. Kiser's corn led the test. His corn yielded 7.2 bushels per acre more than the average of his 12 neighbors. Since this test was made, the community has adopted the Kiser corn (a good strain of Cocke's) Eleven growers of this community are now practising field selection from this strain.

Community Soybean Improvement

Special efforts have been made during the past season to introduce more soybeans into the Piedmont and Mountain sections of the state. Information was furnished county agents and special articles were supplied to the papers of this section. An extension circular supplying the results of variety tests and cultural experiments in these sections was also prepared and issued.

The three selected strains of soybeans, Mammoth Yellow No. 101, Haberlandt No. 38 and Virginia No. 11, were distributed to growers who were prepared to save seed. Recent reports from this work indicate that 210 bushels of Haberlandt No. 30; 48 bushels of Mammoth Yellow No. 101, and 56 bushels of Virginia No. 11 will be saved for seed this season. The strain of Haberlandt No. 38 has become popular in every community where it has been tested. If North Carolina is to hold its place as a soybean producing state, it will be necessary to use more selected seed of these varieties. The price of our soybeans during the past three years has been due to their use for seed purposes in new areas. When other southern states have become stocked with our seed, our advantage can only come from offering better bred seed.

Community Wheat Improvement

The community wheat improvement has consisted of community variety tests and the distribution of selected seed wheat grown at the Central and Iredell farms. During the past season, four variety tests were conducted in three Piedmont counties and 150 bushels of pedigreed Leap's Prolific seed wheat were sold to growers who were prepared to save good seed for the plantings. On account of the shortage of seed wheat this season, a list of growers having good seed wheat was secured and distributed to county agents and inquiring farmers. Forty-two samples of seed wheat were germinated and the results reported to growers.

Reports from the seed wheat distributed last season have been encouraging in spite of the unfavorable season.

In order to supply the eastern part of the Piedmont and Coastal Plain sections with an earlier variety of wheat, one breeder of Purple Straw has been established at Speed, North Carolina. One hundred and fifty bushels of improved seed wheat were sold from that source during the past season.

Distribution of Pedigreed Rye

Sixty-five bushels of pedigreed Abruzzi rye have been sold from the Central farm and placed in the hands of growers who are prepared to save it for seed purposes. This strain of rye yielded 5.8 bushels per acre more than the best commercial strain secured on the market. It is much earlier and more productive than the common winter rye or the ordinary strains of Abruzzi. The demand for rye throughout the Piedmont and Coastal Plain sections should make this a popular strain. Abruzzi rye has not been pro-

duced in sufficient quantities to meet the demands since its introduction, and the price has seldom been less than $3.00 per bushel. Considering the price and yield of seed, it is a much more profitable crop in the eastern Piedmont and Coastal Plain sections than is wheat.

MISCELLANEOUS EXTENSION WORK

From time to time this office has been called upon for service that does not come under a definite project. Seed samples and outlines for crop improvement teaching have been supplied to eight farm life schools. Short courses in seed improvement have been given at three of these schools in which students of the school and their parents attended. Combed samples of cotton, showing the poor and good qualities of staple secured from unimproved and improved varieties of cotton, have been supplied to all of the county agents of the Coastal Plain and Tidewater sections. Corn selection schools for corn club members have been conducted in two counties. Judges have been supplied for four fairs. During the past season, a large number of weeds and grasses have been sent in for naming and recommendations regarding their eradication or their adaptability for economic purposes in this state.

WORK WITH SUGAR PLANTS

The sugar plant work is carried on in cooperation with the office of Sugar Plant Investigations of the U. S. Department of Agriculture. Each succeeding year since the beginning of the sugar plant work, there has been a notable increase of interest on the part of farmers and county agents. The present year has been marked for the greatly increased requests for help from both county agents and farmers, particularly in the sorghum work, and in some mountain counties with sugar beets as well.

At the present time, sorghum is by far of most economic importance in the state, but the sugar maple and the sugar beet are both possible of development into valuable industries. During the year personal work has been carried on to greater or less extent in about 20 counties. Most of these meetings, called by the county agent, were addressed by the specialist in charge of this work. In all, about 30 meetings were held and considerably over a thousand farmers were reached by this method. As a further means of arousing interest, a number of news articles were prepared for the press of the state. Many persons were also reached by personal interviews in company with county agents. A much larger number of inquiries concerning the sugar plants, methods of making syrup and kindred subjects were received and answered than ever before.

Sorghum

Demonstration plats of different varieties were located in six localities in the state as a means of further demonstrating the value of different varieties. In making the syrup from these varieties, meetings of syrup-makers were held and demonstrations of syrup-making given. In all the sorghum work, the following points were stressed:

1. Use for planting pure seed of the best varieties.
2. Better cultivation.
3. Harvesting at the proper period.
4. Better equipment for making syrup.
5. More care in cleansing juice and cooking, and greater care in canning and storing syrup.

As an evidence of the interest in better syrup making, in one county alone ten syrup-making farmers bought thermometers for determining the finishing point.

Since the beginning of this work there has been a great improvement in the character of the syrup and in higher production.

Sugar Beets

In conformity with plans made with the Board of Trade of Hendersonville with the county agents of Buncombe and Transylvania counties and with citizens of Jackson County during the latter part of last year, about twenty plats of sugar beets of one-fourth to a half acre each were planted by some of the leading farmers of the counties named. Misfortune of one kind or another destroyed some of these, but a majority have done exceedingly well. The beets had a splendid stand and evidently will produce a heavy tonnage. Data on sugar content and tonnage has not yet been secured for the year, but the prospects are bright for a good return in both sugar content and weight per acre.

Sugar Maple

The last season was a poor one for the production of maple sugar and syrup in all of the maple regions, the winter being too warm and open with little freezing and thawing weather in the spring. Still a considerable amount of syrup and sugar was made in the sugar maple regions of the state. Reports reaching the office indicate that owners of maple groves are taking better care of them than ever before. To arouse interest in preserving these groves is as valuable at this time as to secure a greater production of maple sugar. If the groves are preserved and protected a greater production of maple sugar will soon follow.

Sugar Cane

It has been impossible to do any specific work with this crop during the year. In a recent trip through a portion of the sugar cane region I was reliably informed by county agents and farmers that more is being grown in this state this year than ever before.

In the whole range of the work it is evident that farmers and others are aroused as to the importance of the sugar plants both as sources of good and as money crops.

PUBLICATIONS

During the year, the following extension publications have been prepared and published by workers of the Division of Agronomy:

Circulars

Soybeans for the Piedmont and Mountain Sections of North Carolina. (N. C. Extension Service Circular No. 111.)

Spacing Cotton on North Carolina Soils. (N. C. Extension Service Circular No. 112.)

Equipment for Making Sorghum Syrup. (N. C. Extension Service Circular No. 117.)

Before closing, I wish to commend the earnestness and fidelity to duty of those associated with me.

Respectfully submitted,

C. B. WILLIAMS,
Chief, Division of Agronomy.

REPORT OF THE DIVISION OF ANIMAL INDUSTRY

To the Director: It is not the intention in the following report to set forth in every detail the work performed by the various workers of the Animal Industry Division but rather to indicate clearly and concisely a statement of the various phases of work now under way or completed during the last fiscal year.

Some few problems of lesser importance have been dropped due to the stringency of funds. Wherever possible, however, all problems of a short time nature were concluded. This was done in an effort to help out in the readjustment taking place. The chief efforts of the division from this standpoint were to continue all experimental problems of a distinctly research nature and all extension problems which could not be dropped or curtailed without seriously interfering with the work.

It it is your desire to have further details concerning any of the experimental or extension problems such will be gladly furnished upon request.

The following is a summarized report of the extension work performed by the various offices of the Animal Industry Division:

Beef Cattle and Sheep Extension Work

1. *Permanent Pastures.*

   Realizing that successful live stock production is based on pastures, much of the effort of the field work done by beef cattle and sheep workers was to promote the making of pastures.

2. *Purchase of Purebred Beef Cattle.*

   While not as many sales of purebred beef cattle were held last year as formerly, a large number of purebreds have been placed in other ways, principally by individual solicitation.

   One very successful Hereford sale was held at Fairview, Buncombe County, North Carolina, last October. This was in cooperation with the County Agent and the Fairview Farm Federation.

   The chief reason why fewer sales were held is due to the fact that the state now has a number of good beef herds from which breeding animals may be selected. It is our policy always to do this when good cattle are available.

3. *Herdsmen's Short Courses.*

   These short courses were held in connection with the sheep schools. These courses are designed to give lessons in feeding and fitting animals for market, show ring and sale, grooming, leading, halter making, and other requisites of the farmer and stockman.

   L. I. Case, former beef cattle field man of this state, assisted the workers in the Beef Cattle and Sheep Office during the schools held in western North Carolina.

4. *Barn, Silo, and Dipping Tank Construction.*

   These are three lines of work on which much help has been given. This was done in co-operation with E. R. Raney, in charge of farm engineering work.

   At the present time two large model cattle barns are in the course of construction for cattlemen in Alamance County.

Plans and suggestions are furnished to all stockmen making application for same.

5. *Marketing Beef Cattle.*

This work was done in cooperation with the Division of Markets. Assistance has been given in helping to market about 1500 head of cattle. At the present time this office is arranging to market five carloads of cattle for western North Carolina stockmen.

6. *Fairs and Miscellaneous Work.*

As a result of the work of this office one of the largest and best shows of beef cattle ever held was staged at the North Carolina State Fair. This was a result of having come in close contact during the year with some of the best breeders in the state.

A standard classification for beef cattle was arranged and adopted by all of the county and district fairs in eastern North Carolina. Judges were furnished to judge beef cattle at six fairs throughout the state, expenses having been paid by the fair association.

7. *Purchasing Purebred Sheep.*

During the year Mr. Evans purchased 49 purebred rams and 51 purebred ewes, and 120 grade ewes for sheep men in the state.

8. *Sheep Shearing and Wool Tying Demonstrations.*

Fifty of these demonstrations were held at which 247 sheep were sheared by Mr. Evans and farmers to demonstrate how to properly shear sheep and tie and prepare the wool for market. The attendance at these demonstrations numbered 266.

9. *Docking, Castrating and Drenching Demonstrations.*

This series of demonstrations was in part simultaneously held with the sheep shearing demonstrations and in part constituted a later series of demonstrations, especially in the western part of the state where lambs are dropped much later in the year than in the eastern part of the state.

Sixty of these demonstrations were held with an attendance of 265. Three hundred and twelve lambs were docked and 217 castrated during these demonstrations.

10. *Senior Student Demonstrations.*

During these demonstrations with the senior college students 58 sheep were sheared, 42 lambs docked, and 24 lambs castrated. These were given by special request.

11. *Trimming, Fitting and Culling Demonstrations.*

Seven of these demonstrations were held with an attendance of 42 farmers. These were for the purpose of showing how to properly fit animals for the show ring and to explain why certain animals should be culled from the flock.

12. *Boys' and Girls' Judging Contest.*

Mr. Evans personally conducted one of these judging contests, having in attendance 20 boys and girls.

13. *County Agents' Schools.*

On April 6, 7, and 8, a three-day school was given for the county agents in the western district. During this school lessons were given in docking and castrating, shearing and tying wool, fitting sheep for the show ring and explaining how to detect sheep with stomach worms and how to treat same.

The county agents expressed themselves as being unusually well pleased with this form of information. After each phase of the work had been explained the agents took active part in the work themselves.

In addition to this school a *herdsmen's short course* was given by L. I. Case, former beef cattle field man in the state. More of this kind of work is strongly recommended.

14. *Moving Sheep Schools.*

By special arrangement with the State Highway Commission a truck was secured for conducting these schools. This truck was furnished gratis, permission having been given by Mr. Frank Page to use the truck for this purpose.

The chassis is equipped with a 16 ft. live stock body 8 feet wide which is divided into two compartments with a feed rack and feed trough built in with a partition. Eight sheep representing the Shropshire, Hampshire, Southdown and Dorset breeds are carried in the truck for demonstration purposes.

In addition sheep shearing and wool tying equipment, docking and castrating equipment, wool samples, blankets, models of sheep barns, and other necessities of the sheep business are carried.

This school has been taken to the following fairs this past fall: Four Counties Fair, Mebane; Craven County Fair. Newbern; Catawba County Fair, Hickory; Gaston County Fair, Gastonia; Wilson County Fair, Wilson; Coastal Plains Fair, Tarboro; Moore County Fair, Pinehurst; State Fair, Raleigh.

This school is not only bringing results but is demonstrating the need of more such work. That is, having such arrangements so that the information needed by the farmers can be carried directly to them no matter how inaccessible some of the communities may be.

15. *Lamb and Wool Marketing.*

Mr. Evans has worked in close co-operation with the marketing division during the year. Forty thousand pounds of wool have been marketed for farmers by having this wool manufactured into blankets and then aiding in their sale. This was done because of the fact that there is no market for wool.

More than 4,000 pairs of blankets have been manufactured, results indicating that the farmers have secured from 50 cents to $1.25 per pound for their wool through this source.

Aid was given in cooperative lamb marketing. One car load was shipped to Philadelphia and one to Richmond with good results, netting the farmers much more than they could have received locally.

16. *Miscellaneous Work.*

(a) Three side trips were made to the Iredell Test Farm to shear flock, dock and castrate lambs and to cull out the inferior breeding stock.

(b) An educational exhibit of sheep and wool products and barn models was given at the Farmers' Convention in August.

(c) Judged all live stock at seven county fairs.

(d) Aided Vocational boys and girls in judging sheep in preparation for judging contest.

(e) Had sheep, wool, and model barn exhibit at State Live Stock Meeting in Salisbury in December.

(f) Gave course of lectures at Hawfields Schools on the breeding, feeding, and management of sheep.

17. *Dog Control Law.*

The State Dog Control Law as passed by the State Legislature leaving the enforcement of same to county authorities is not effective. Some state central control is needed as advocated in the law prepared by this office.

Dairy Extension Work

J. A. AREY, *In Charge*

ASSISTED BY A. C. KIMREY, J. A. CONOVER, F. R. FARNHAM, H. L. WILSON, W. A. GRAHAM, W. L. CLEVENGER.

1. *Construction Work.*

Personal assistance and plans were furnished the following number of men on building and remodeling.

(a) Barn Plans	17
(b) Remodeling Barns	15
(c) Silos built	25
(d) Milk houses built	5
(e) Bull pens	1

This work was generally conducted throughout the state. Some of the work was done by the regular members of the office. During July, August and September L. P. Hahn was especially enployed to do silo work.

2. *Cheese Factory Development.*

The spring season for cheese making opened up three weeks earlier this year than usual and milk production was nearly 20 per cent more than the same period last year. Practically all of the factories had started operation when the price of cheese began to decline. A few factories suspended operations until the patrons could realize ten cents per gallon for their milk.

During February a very successful cheese makers short course was held at Sugar Grove in Watauga County. An entire week was devoted to this work. The first three days were devoted to lectures on methods of cheese making, feeds and feeding, care of the herd, feeding of calves, construction of barns and silos, and growing of feed crops. The remaining three days were spent in the Cove Creek Cheese Factory giving students practical work in cheese manufacture.

The daily attendance varied from 12 to 40 farmers. A stereopticon was used to illustrate the night lectures.

Plans have been made and equipment purchased for manufacturing Swiss cheese at the Cove Creek factory. This is probably the first attempt at making Swiss cheese south of Ohio. The indications are that this industry will be successful and if so several other factories will be fitted with Swiss cheese equipment next summer.

During the past year in the cheese area assistance was furnished in remodeling and constructing ten barns, ten silos and one milk house. Sixty meetings were held with a total attendance of 280 farmers, and in addition 552 personal calls were made.

The following is a summary of the cheese factory work during the past year:

Total amount of cheese manufactured (lbs.)	1,513,022
Total amount of money returned to farmers	$319,638.57
Total farmers served	705
Total cows brought into community	850

3. *Purchasing Family Cows.*

The difficulty in securing money during the past year has made it almost impossible to place cattle. However, during the past three months since the price of cotton and tobacco has advanced, considerable interest is being manifested by farmers in securing family cows.

Orders have been taken in the eastern part of the state for three carloads of grade cows to be used for family cow purposes.

Assistance has been furnished in conducting two sales of registered Jersey cattle, one at Shelby, where 11 head were sold. Prices received at both sales were very satisfactory.

4. *Bull Associations.*

Bull association work, like other phases of extension, has lagged somewhat, especially where money was involved. On the whole, this work has progressed satisfactorily. Union and Anson Counties are interested in such organizations. Since the price of cotton and tobacco has gone up a number of requests have been received to do work of this character.

5. *Milk Utilization.*

In order to increase the present low consumption of milk and milk products, the dairy extension office assisted by the office of home economics, conducted two milk campaigns. The first one was held at Winston-Salem during the week of February 21, and the second one at Asheville during the week of April 25.

The Winston-Salem campaign was the first one held in the South. In both campaigns the extension forces were assisted by the Federal Department of Agriculture, the local chamber of commerce, health departments, parent-teacher associations and women's clubs.

The campaign was filled with features of an educational nature including window demonstrations and exhibits, poster and essay contests in schools, talks for children, grown-ups and factory workers. A large amount of literature was distributed showing the food value of milk and its relation to health.

The necessity for these campaigns was apparent from two existing conditions. First, the average daily per capita consumption of milk in Winston-Salem was found to be only about one-fourth of a pint, while that of Asheville was about one-half pint, which health experts consider entirely too low. Second, there was a surplus of milk during the summer months.

During the campaign in Winston-Salem approximately 10,000 people listened to the talks about milk, while many thousands more saw the exhibits and demonstrations. It was found that among 5,647 school children in Winston-Salem that less than half were drinking milk daily. Two thousand one hundred and twenty-three children confessed they drank no milk at all and the remainder drank it only occasionally.

The daily per capita consumption of milk in Asheville was found to be considerably greater than in Winston-Salem. In the Asheville campaign 7,575 people were addressed on the subject of milk. Fifty-five hundred school children who were surveyed showed that 75 per cent drank milk.

The results of these campaigns increased milk consumption materially as indicated in letters to the dairy extension office by milk operators in a number of the leading cities. Among these were the Carolina Creamery Company, The Asheville Milk Depot, and the Winston-Salem Milk Depot. Numerous well taken editorials were published in the leading daily papers as a result of this campaign, all strongly advocating the use of more milk.

6. *Creamery Manufacturing.*

During the past year 1,460,540 pounds of butter have been manufactured by the several plants in the state. The increase of butter production this year over last year is not altogether due to the importation

of more cows but rather to better methods of care and feeding by farmers who have become interested in dairy work through the dairy field office.

The following report of one creamery in the state is indicative of the volume of the business:

(a) Number of patrons	710
(b) Number of pounds butter made	208,710
(c) Receipts for butter, eggs, and buttermilk	$111,453.76
(d) Average price paid for butter fat (cents)	.512

Larger churns are being installed, skimming stations established, and in one case a strictly ice cream plant has recently installed butter making machinery.

This work has been supervised by W. L. Clevenger, who has submitted a detailed report of the work of the various creameries. Mr. Arey has organized cooperative creameries at Burlington and Lenoir. These will be ready for operation in the spring.

7. *Official Testing.*

This work has grown until it requires the full time of two men in the field to do testing work, check monthly reports and tabulate records.

During the past year 32 dairy farmers have carried on testing work at a cost to them of $1,737.64. At the present time there are 153 cows on official test.

This testing work has no doubt done much to stimulate better methods in the feeding and management of dairy cattle. The news letter issued monthly by the dairy extension office is stimulating a rivalry among feeders.

The sixty dollar trophy which was secured to award the owner of the cow producing the largest amount of butter fat during the year was awarded last year to Mr. J. F. Diggs of Rockingham on Fortune's Admiration. This year it will be won by Mr. W. R. Lutz of Newton on Forfarshire's Golden Rosette, with a production of 787.42 pounds of fat.

In connection with this work assistance was given in organizing a Jersey Breeder's Association in Catawba and Cleveland Counties, and also a State Jersey Breeders' Association.

8. *Fairs and Exhibits.*

(a) An exhibit on the comparative food value of milk with other common foods and an exhibit of dairy products was made at Salisbury Live Stock Meeting in December, 1920. Dr. E. V. McCollum of Johns-Hopkins University lectured at this meeting on milk and its relation to health.

(b) An exhibit showing the chemical composition of milk was made at the State Farmers' Convention in August and also at both white and

(c) At the recent State Fair held there were 115 entries representing all of the important breeds of dairy cattle. This was the largest and best show of dairy cattle ever held here and was largely due to the efforts of the dairy extension workers.

(d) A special cheese exhibit was made at the Winston-Salem fair, all expenses of which were borne by the fair association.

(e) There have been three exhibits and scoring contests of cheese, three of butter and ten exhibits showing the food value of milk. Each time has been used during the past year in demonstrating the food value of milk in order to create a demand for more cows.

9. *Dairy Schools and Meetings.*

During the year 58 dairy schools and meetings dealing with various phases of dairy extension have been held with a total attendance of 5900 people.

In addition the cheese men have held 60 meetings with a total attendance of 2,604 people while Mr. Kimrey held 40 meetings with a total attendance of 6,070 people, making a grand total of 158 meetings with an attendance of 14,778.

During the year Mr. Arey made 473 personal calls and the cheese men 582, thus making a total of 1025.

10. *Summary of Dairy Extension Report.*

Number of barns built	13
Number of silos built	25
Number of barns remodeled	4
Number of milk houses built	5
Number of barn plans sent to other parties by request	17
Number of bull pens built	1
Number of cheese factories assisted	26
Number of pounds of butter manufactured by creameries	1,460,540
Number of separate meetings and dairy schools	158
Total attendance	14,778
Total number of personal calls	1,025
Number milk campaigns	2
Number exhibits	16
Number cows on official test	133
Amount farmers paid for official testing during year	$1,737.64
Number of letters written	1,560

Swine Extension Work

W. W. SHAY, *In Charge*

1. *Swine Feeding Demonstrations.*

The necessity of conducting definite demonstrations by extension specialists on the farms is again being repeated in the swine work. It has not been possible to follow out all of the demonstrations planned because of the physical inability of one man to do so.

Definite figures have been obtained, however, in herds ranging from 5 to 34 animals and totaling 125 hogs. During these demonstrations both the animals and the feeds consumed by them were weighed monthly up until the final sale of the animals.

The average results of all such demonstrations conducted by the office of swine extension during 1921, are as follows: Total number of hogs used, 125; average daily gain per pig, 1.25; lbs. food per 100 lb. gain, 264; feed cost per 100 lb. gain, $5.85; value of gains at 10c, $1,030.14; total cost of feed, $603.43; daily ration per 100 lb. live wt., 3.75; return over feed cost at 10c $426.71; monthly returns per acre pasture, $15.23.

The prices at which the feed was charged: Corn $1 per bushel; tankage $70 per ton; corn meal $40 a ton; wheat shorts, $40 a ton.

Feeding demonstrations have been planned on 20 farms in 14 counties for the coming year. It is believed that improvement along these lines will be followed rapidly by an increase in the number and type of animals used for pork production.

Reports from such demonstrations are convincing and afford definite proof of the profits to be derived from the proper feeding and care of hogs.

2. *Miscellaneous Demonstrations.*

Other demonstrations conducted during the year have been in the building of colony houses, self feeders and breeding crates. This work has been so effective that plans have been made to conduct seven colony house demonstrations, four self feeder demonstrations, and three breeding crate demonstrations this coming year.

3. *Purchase and Sale of Swine.*

Assistance has been given to farmers in buying breeding stock. In a great many instances animals have been personally selected when this could be done without the expense of a special trip for the purpose.

Many animals of known merit have been recommended to inquiring, respective buyers and a large percentage of such recommendations have resulted in sales. Assistance has been rendered at four public sales of pure bred hogs and also on the marketing of pork hogs.

4. *Pig Club Work.*

Not as much attention as is desirable has been given to pig club work. This is because that pressure of other work has left very little time for work of this nature.

5. *Cooperation with Vocational Educational Department.*

This office has cooperated with the Department of Vocational Education in putting on "Short time Schools in Swine Husbandry." These were not started until late in the season and were held in only three counties, but already applications have been received for more assistance in this work during the coming winter.

These short course were considered very successful. Roy H. Thomas, director of the vocational work, has advised that the program used by this office has been adopted as a standard by the Federal Department of Vocational Education.

6. *Miscellaneous Work.*

(a) Timely articles have been prepared for the press, a large percentage of which have been used.

(b) Circular letters have been sent to county agents, members of the N. C. Swine Breeders Association of which Mr. Shay is president, and to a large mailing list of hog raisers.

(c) During the year plans were perfected for mailing a monthly blotter carrying "Timely Suggestions" and useful tables. This was sent to about 2000 swine growers monthly.

(d) Requests have been received from a prominent bank for permission to send out 500 copies of the monthly letter to patrons of the bank. A similar request has also been received from the president of a cooperative association to print it in their association paper which has a circulation of 570.

(e) Scenario for a moving picture has been arranged by Mr. Shay and submitted to Mr. W. S. Crosby, Director of the Department of School Extension. Mr. Crosby advises that this scenario opens up a new, wide and untouched field and states that if put in the moving picture circuit it would go before 20,000 people in the rural communities.

(f) A new type of score card has been devised and gotten out in blue print form and also printed as a revised score card in Extension Circular No. 116.

(g) One of the largest swine shows ever held at the State Fair was due largely to the efforts of the office of swine extension. The housing capacity for swine has almost been doubled and the premium money increased 25 per cent.

Poultry Club Work

ALLEN G. OLIVER, *In Charge*

1. *Subject Matter Projects.*

(a) Fifty to one hundred hens on each farm, these to be standard bred birds of one variety only.

(b) Organizing communitiees wherever possible to adopt one breed only.

(c) Early hatching and keeping early hatched pullets up to the number wanted.

(d) Planting of grazing crops and a succession of same for year round grazing.

(e) Proper feeding of fowls for heavy egg production.

(f) Proper feeding of chicks that they reach maturity in the shortest possible time at the least cost.

(g) Proper feeding of all birds for market.

(h) Proper grading of eggs.

(i) Marketing of all poultry products.

(j) Proper construction of practical farm poultry houses, brood coops, water founts and feed hoppers and other equipment.

(k) Culling flocks.

(l) Infertile egg campaign.

(m) Preserving eggs.

(n) Sanitation, lice and mites.

(o) Judging.

2. *Methods of Reaching Workers.*

(a) Through the county agents (men and women), assisting them in every possible way.

(b) Through the local leader or secretary of local community club.

(c) Organized clubs at the schools selected by the agents.

(d) Through the organization of clubs. Lecturing in the counties at meetings arranged for by county agents and personal visits to inspect local flocks.

(e) Furnishing literature for distribution to all requesting same. Writing local articles for local county papers.

(f) By having the members of poultry clubs read papers and discuss methods used by them.

(g) Having the local agents (men and women) write up local meetings. Write local timely articles for the county papers. Many of these are sent from office of poultry clubs.

(h) Coaching and training all county agents that they may become efficient in the work.

(i) Furnishing them with bulletins and other literature and making working models for their use at all meetings.

(j) Holding judging contests in all counties.

(k) Writing timely articles for the state papers.

(l) Giving to the papers stories, written by club members, showing cash records of all money received and spent.

(m) Giving them reports of work throughout the state and all show records and awards.

(n) Making a club exhibit at Madison Square Garden Poultry Show at New York.

(o) Using the reports sent in to the county agents by the members.

(p) Giving publicity where these demonstrations can be seen.

(q) By giving publicity through the press of the records made. Using them to refer to at meetings. Referring all interested in the betterment of their flocks to visit some of the farms where proper methods are in use in their home county.

(r) By compiling all reports in each county separately.

(s) By having county agents send in to the office of poultry clubs a summary of all reports received.

3. *Summary of Work.*

The following tabulation shows clearly the activities of this office during the past year:

(a) Miles traveled by rail	9,534
(b) Miles traveled by team	3,777
(c) Number of letters written	1,713
(d) Number of homes visited	648
(e) Number of farms visited	648
(f) Demonstrations	768
(g) Meetings	134
(h) Number in attendance	14,762
(i) Community fairs	8
(j) Other shows and fairs	12
(k) Number of members showing	293
(l) Number of birds shown	1,165
(m) Cash won	$828.75
(n) Poultry houses built	65
(o) Number of flocks culled	497
(p) Number of conferences	48
(q) Number of local articles for press	44
(r) Number of dozen eggs shown	86
(s) Number of poultry judging contests	5
(t) Number of educational exhibits	17

Tabulated Summaries

The activities of the various offices are shown in the following table:

Name of Office	*No. of Meetings*	*No. of People Attending*	*Letters Written*
Dairy Extension	158	14,778	1,560
Beef Cattle and Sheep	120	6,000	4,000
Swine Extension	20	2,012	1,258
Poultry Clubs	134	14,762	1,713
General Office	4	1,200	1,100
Total	436	38,752	9,631

Respectfully submitted,

R. S. CURTIS,
Animal Industry Division.

REPORT OF THE DIVISION OF ENTOMOLOGY

To the Director: I present the following report on operations under my charge in extension work in general entomology and in beekeeping:

General Entomology

W. Bruce Mabee

This work is done in cooperation with county agents, farmers, and others.

The chief subjects of work this year have been: Winter spraying of orchards, potato spraying (in east); boll-weevil; and seed potato maggot. Under these subjects 14 counties were visited and worked in, and 21 meetings or demonstrations were held, with a total attendance of over 500 persons. There have also been many personal conferences with one (or several) persons at a time, both in office and field.

Mr. Mabee prepared four press articles,—also an extension circular,—sent out over 150 copies of larger publications, 900 circular letters (on 3 topics), and sent 3,000 copies of a small extension circular on Boll-weevil to county agents and others. Sundry inquiries were answered in regard to general orchard spraying, Hessian Fly, control of Aphids, cotton Red Spider, cabbage dusting, weevils in corn, etc.

While in this work Mr. Mabee is willing to give information on any insect topic as far as feasible, yet the topics which he is especially to emphasize are those in which our investigational work has yielded special data as a basis or those topics which are known to be of greatest economic importance. Thus, at this writing he is now arranging for work on fumigation of corn, etc., to control weevils, this having been the subject of many inquiries in the last few months.

During much of the summer Mr. Mabee's services were given to the cooperative marketing campaign (not entomological to be sure) in which he did very good work.

In accordance with decision in conference of the director and extension workers, we planned that Mr. Mabee should spend approximately one-half time at headquarters for office work, consultations, plans, and study; therefore the activities here reported represent somewhat less than half-time in the field on this work.

Extension Beekeeping

C. L. Sams

This work has been going steadily since 1916, and is so well appreciated by county agents and beekeepers that all calls cannot be fully answered. During the year Mr. Sams has worked in 38 counties, held 218 meetings and demonstrations with a total attendance (including personal conferences) of 3,183. The subjects most emphasized are: behavior of bees, management, queen-rearing and re-queening, transferring, better methods, preparation for winter, and preparation for honey-flow.

Meetings are held in cooperation with county agents in counties which have agents. There has been a noticeable let-up in the interest in beekeeping. The exhibits of honey and beekeeping appliances at the State Fair

this fall far surpassed any previous years. During the year several persons have announced their intention of making beekeeping a specialty or main business. It is this permanent development of commercial beekeeping which this work is especially intended to encourage.

Publications

In the report on the investigation work of this division for the year, there is presented a complete list of the papers and articles published by members of the office staff. Six of these articles are of an "extension" nature, designed to give timely information to farmers, fruit-growers and others on insect control, but it seems needless to repeat the titles here.

Acknowledgment

It is a pleasure to acknowledge the support which you have at all times given to this work, and also the loyal service of both of our extension workers.

Respectfully submitted,

FRANKLIN SHERMAN,
Chief in Entomology.

REPORT OF THE DIVISION OF HORTICULTURE

To the Director: The success of the extension work in a state depends upon determining the real problems of horticulture, the soundness of principle on which the work is conducted, and the degree of efficiency developed in presenting the demonstrations and subject matter to the people. The final measure of success of any demonstration is the extent to which the practice demonstrated is actually adopted in the community.

An earnest effort has been made to determine the most important problems in horticulture in the state so that the horticultural extension work could be organized on a logical basis and so that the maximum amount of service could be performed. A logical and well balanced program of extension work is based upon problems of both commercial horticultural crops and those of home importance. A close study of the horticultural development and possibilities of the state has been made to determine the commercial and home problems. The most important commercial horticultural industries in the state are those of the sweet potato industry in the Coastal Plain and Piedmont sections of the state, the early Irish potato industry in the Coastal Plain, the apple industry in the Mountain section, the late Irish potato industry in this same section, and the peach industry in the Sand Hills. From a home standpoint, the home gardens and home orchards are certainly the most important phases.

The commercial interests of the state have been studied from the viewpoint of the problems of existing industries and from the standpoint of the developing of new industries for which the certain sections of the state have special natural and economic advantages. Similar study has been made with the home aspects of horticultural extension.

The limiting factors or problems with reference to the horticultural development as outlined above are:

(1) More thorough pruning and spraying in commercial orchards.

(2) More home orchards and more careful attention to home orchards on North Carolina farms.

(3) Home gardens for both rural and urban families.

(4) A better distribution of the sweet potato crop through the use of storage houses.

(5) Improved cultural practices in both sweet and Irish potato production.

(6) The need of closer association among growers and the development of organization in handling their business rather than the development of the individual system.

A definite and logical program for horticultural extension, combining definite objects to be accomplished with definite plans of work, has been developed on the project basis so that these problems could be met. The program is composed of the following projects.

FRUIT PROJECTS

(1) *General Demonstration Work in Pruning and Spraying.* General demonstrations in pruning and spraying in cooperation with the county

agent, conducted in young orchards, mature orchards, and old orchards. Agent to select orchards, provide pump and material, advertise date and secure crowd.

(2) *Orchard Plot Demonstration in Pruning and Spraying.* Three plots in commercial orchards are used, showing value of pruning and spraying. Orchards must be located in good apple producing counties, with typical orchard for the section, near good roads, more or less contiguous to other orchards, with problems of the section. On a cooperative basis with county agent and owner. Three year basis for operation. Maximum of eight meetings a year. Accurate records to be kept on cost and effectiveness.

(3) *Demonstration Home Orchards.* In cooperation with county agent featuring this project. Visits made, demonstrations in pruning, spraying, and management given.

(4) *North Carolina Apple Show and Fruit Growers Conference.* An apple show to stimulate the development of the apple industry together with a program to supply information to growers so that the best orchard practices may become more generally employed. Cooperation with the county agents in selection, packing, and exhibiting fruit from the different apple counties.

(5) *Consultation Work in Orcharding.* Consultations with county agents and commercial orchard owners on special and individual problems.

TRUCK PROJECTS

(6) *Demonstrations in the Construction and Operation of Sweet Potato Storage Houses.* In cooperation with county agents and progressive organizations, meetings to stimulate interest, information on varieties, production methods, harvesting, curing and storage, showing model house, follow up.

Demonstrations in harvesting, grading, handling, and operation of storage house. Plans of house construction, rules for operation, points of caution and care, news articles, bulletins, consultations on construction of large houses, with assistance in operation. Confined to counties suitable to commercial production.

(7) *Home Garden.* Organization of rural and city garden clubs. Under direction of county and home demonstration agent. Plans and records on request. Bulletins, circulars, press stories and general information.

(8) *Consultation Work in Truck Growing.* Consultations with county agents and commercial truck growers on special problems.

ORGANIZATION OF EXTENSION WORK

In the organization of demonstration work, it has been found that the definite project plan and program basis is the most satisfactory system. A descriptive list of horticultural extension projects is sent to each county agent so that he can select those projects best meeting the needs of his county to include in his plan of work for the coming year. At the county agent conferences of the different districts the scope of the different projects is explained in detail, as is the manner of conducting them. The agents submit their program for horticultural work to the specialists and a cooperative program between the agents and specialists is worked out and any re-adjustments necessary are made so that a definite year's work is planned with certain objective points and methods of attack fully outlined.

The general tendency in the past has been to take care of miscellaneous requests for demonstrations that have been made by county agents and

others. While some good has come from this scattering type of work, effectiveness has been weakened by lack of concentration and organization. Although it will always be necessary to meet some requests for general demonstrations, we are anxious to concentrate and confine our efforts to definite organized work, and are trying to discharge the isolated type of meeting or demonstration. The work is planned to reach groups rather than individuals. This plan has brought about closer working arrangements between the county agents and extension workers. The division relies on the county agents to work up county and community groups for the different projects. The work of the division is conducted largely through county agents, the home demonstration agents, boards of trade, fairs, fruit shows, and different local agencies. Extensive use is made of the daily press, circular letters and circulars in aiding campaigns and in the dissemination of information.

Extension work in horticulture has continued to increase in value and usefulness to the horticultural interests of the state. Each year, there is an increased number of calls for assistance. The demand for information and assistance has greatly extended the activities of the division, both from the standpoint of correspondence and consultations. The recent depression of values in such agricultural crops as cotton and tobacco has caused an immensely increased interest in horticultural crops. This is especially true in the cotton counties in the southern part of the state along the South Carolina line where, in addition, the ravages of the boll weevil are causing the cotton growers to turn to other money crops.

We have found in our work that a well executed and explained demonstration is of far greater value than a lecture. The subject matter taught by the demonstration should be slightly in advance of the time that it is to be used. For example, pruning demonstrations should be given in late fall or early winter; then the growers attending will have an opportunity to practice what they have learned. It is important that there be a close understanding between all men of the department and unity of ideas regarding subject matter. Extension work may be rendered almost valueless in a given section by two men from the same division advocating widely different practices or methods. Unity of teaching can be secured by frequent informal conferences to consider subject matter and departmental recommendations regarding it.

During the greater part of the year, the division has been without the services of an extension horticulturist, other members of the division conducting the work done in this field. W. W. Magill was appointed extension horticulturist in August and has been actively engaged in conducting the field work since that time.

A total of 68 meetings in 30 counties were held with a total attendance of 2496. The workers traveled 8010 miles by rail and 964 miles by automobile to conduct the work. Active work was done on the following projects during the year:

ORCHARD DEMONSTRATION WORK

For the most part, the work done under this project consists in general demonstrations in pruning and spraying given in cooperation with the county agents. The demonstrations are conducted in young orchards, in mature orchards, and in old orchards where renovation is needed. Considerable attention has been given to this type of work because of its importance, the limiting factors of apple and peach production in the state being the ones of pruning and spraying.

Orchard Plot Demontsrations in Pruning and Spraying

To conduct this project, commercial orchards were selected in five nearly contiguous apple producing counties in which to locate plots to demonstrate pruning and spraying practices. The extension specialist and the county agent cooperated in the selection of the orchards. In choosing the orchards, due consideration was given to location, accessibility, and an attempt was made to secure orchards typical of others in the section in regard to variety, age, and other factors.

At each demonstration orchard there are three different plots. One both pruned and sprayed; the second sprayed but not pruned; the third a check plot neither pruned nor sprayed.

Winter meetings were conducted in these orchards but due to the fact that the fruit crop was destroyed by cold, no other meetings were scheduled during the year.

Demonstration Home Orchards

It has been the plan of this work to plant one or more one-acre demonstration home orchards in each county to encourage the planting of home orchards on the farm.

The demonstration orchards have been located in cooperation with the county agents and under their supervision. The plantings have been composed of varieties found by the Division of Horticulture to be the most desirable for the different sections of the state.

During the last four years, nearly 150 of the orchards have been planted. A majority of the orchards have developed very satisfactorily, while a few have been decidedly unsatisfactory. The degree of success of the orchards has been in proportion to the amount of attention given them in almost every case.

SWEET POTATO STORAGE

The sweet potato storage house construction campaign was continued during the year in a very active manner.

In cooperation with the county agents, boards of trade, and other organizations, meetings were held to stimulate interest in storage house construction as well as to supply information regarding all phases of the subject. Demonstrations in harvesting and handling, construction of the house and its operation were given. Over 500 blueprint plans of houses of different capacities were mailed to prospective builders who had requested them. It is estimated that not less than 60,000 bushels capacity of new storage houses were constructed during the year, which brings the total storage capacity of the state to approximately 400,000 bushels.

Respectfully submitted,

C. D. MATTHEWS,
Chief, Division of Horticulture.

REPORT OF THE DIVISION OF MARKETS AND RURAL ORGANIZATION

To the Director: This report is for the year ending December 1, 1921, and covers the extension and service work in the Division of Markets and Rural Organizations, conducted jointly or separately by the North Carolina Department of Agriculture and the North Carolina State College of Agriculture and Engineering, in cooperation with the United States Department of Agriculture under the agreements and plans entered into by these institutions for the conduct of all agricultural work of this kind in the state.

THE STATE WAREHOUSE SYSTEM

From September 1920 to date, warehouses have been licensed under the State Systems as follows:

Aberdeen, 860 bales; Clinton, 2,000; Chadbourn, 600; Creedmoor, 300; Dunn, 3,000; Fairmont, 1,000; Fayetteville, 3,000; Fayetteville, 1,000; Jacksonville, 600; Kelford, 500; Kenly, 1,000; LaGrange, 1,000; Lilesville, 600; Louisburg, 3,000; Lumberton, 3,000; Monroe, 5,000; Moncure, 600; Morven, 1,500; Marshville, 500; Maysville, 125; Oriental, 500; Pee Dee, 200; Polkton, 600; Plymouth, 1,000; Pollocksville, 500; Red Springs, 2,500; Richlands, 1,000; Sanford, 1,500; Selma, 600; Smithfield, 7,000; Spring Hope, 500; Swann Station, 450; Wadesboro, 350; Waxhaw, 250; Weldon, 600; Whiteville, 400. Totals, 36 warehouses; 47,135 bales capacity.

Of the above warehouses, Chadbourn, Plymouth, Sanford, Swan Station and Whiteville did not renew their licenses, while licenses are pending for warehouses at New Bern and Windsor, making a total of 32 warehouses at present in the State System.

The Warehouse Law as amended by the recent regular session made necessary important changes in the form of negotiable receipt.

Until recently the cotton on storage was insured under specific policies taken out by the local managers. This arrangement was open to grave objections, chief among which were (1) with slight changes in price, there was danger of the cotton being caught underinsured, and (2) the necessary and unavoidable overinsurance, amounting to about ten per cent. was a heavy expense to the warehouses. To remedy these and other difficulties, policies, effective November 1, 1921, were secured from the 11 North Carolina insurance companies, which were automatic in nature. These policies are held by the state warehouse superintendent and provide that the cotton is automatically insured when it is received for storage and the insurance automatically ceases when the cotton is delivered from storage. Premiums are paid monthly. It is calculated that the total saving to licensed warehouses will amount to at least 35 per cent reduction below the regular rates.

Under section six (6) of the Warehouse Act, requiring all gins in the state to be licensed, there have been licensed 1,819 gins. According to records from the office of the Commissioner of Revenue, 400 gins have failed to apply for license. These have been notified on several occasions, the most recent being a notice from the Attorney General to the effect that legal proceedings would be instituted in case of continued failure to comply with the law.

The Warehouse Fund at present amounts to nearly $500,000. Of this amount, $147,500 are invested in North Carolina bonds, and $7,850 in United States bonds, while the loans to warehouses are as follows:

Farmers Union of Jones County, Pollocksville	$ 1,000
Kelford Warehouse Company, Inc., Kelford	700
Kenly Cotton Oil and Storage Company, Inc., Kenly	17,500
Fidelity Cotton Warehouse Company, Fayetteville	24,000
Robeson Warehouse Company, Lumberton	25,000
Red Springs Bonded Warehouse Company, Red Springs	8,000
Union County Warehouse Company, Monroe	31,000
Victory Gin Company, Kings Mountain	5,000
Moncure Farmers Cotton Warehouse Company, Moncure	1,500
Farmers Cotton Warehouse, Inc., Smithfield	47,500
Sampson Cotton Warehouse Company, Clinton	25,000
General Utility Company, Dunn	70,000

At present there is on hand for loans $55,000, of which $4,000 has been promised to the Victory Gin Company of Kings Mountain; and $46,000 to the General Utility Company of Dunn, leaving $5,000 available. There is available $27,000 to be invested in bonds.

The Interest Fund available under the law for the administration expense of the State Warehouse System amounted on December 1 to $4,736.75. The anticipated income from this source for the ensuing year amounts to $18,000.

COTTON CLASSING AND GRADING

The work has the following objects in view: To interpret market conditions to the producer and to demonstrate to him the advantages of having a correct knowledge of the value of his product so that he may market it intelligently. Very often we help the producer market his cotton, although in those cases we only act as an agent between the buyer and the seller. In acting in this capacity, it is very easy to demonstrate the correct method in marketing cotton to a street buyer.

To encourage the selecting and planting of a better variety of seed which is best adapted to that specific community, by acquainting the producers with the premiums being paid for the better qualities of cotton.

To encourage care in gathering and ginning by explaining the cause of the low grades and acquainting the producer with the wide discount at which they sell.

To encourage the proper storing of cotton and the building of more and better warehouses, by bringing to their attention the enormous waste suffered each year on account of weather damage, and to the discount in price buyers make on cotton that has been reconditioned.

Our procedure for this year is as follows:

Instead of a classer serving any one town or small community, as they do in other states, in this state we serve a whole county with one classer. For any county to secure the services of this classer, they contribute the sum of $750 toward his salary and expenses. This appropriation is generally made through the county commissioners. However, this is not compulsory, as the appropriation may be made in any other way. The classer is stationed at the county seat. One of the first duties of the classer, after he has opened his office and advertised the fact through the local newspapers, is to make a thorough canvass of the county, call on all producers acquainting them with

the work, and also explaining in detail, so that they may take advantage of same. This is done generally by furnishing the producer with supplies for his use in sending samples to the classing office for classification. These samples consist of cotton tags with coupons attached (the tag is attached to the bale, and coupon, with name and address of owner, is wrapped inside sample, which is to identify the corresponding bale of cotton), paper wrappers for wrapping each sample, and bags to be used as containers. Upon the arrival of these samples at the classing office, they are immediately classed, and certificate, showing grade and staple, is mailed to the owner. This explains the method of grading cotton that is not marketed in the town at which the grader is stationed. On cotton that is marketed in the town at which the grader is stationed, the owner brings samples to the classer's office and it is classed just before sale.

The classers at various times publish articles in the local newspapers relative to some phase of their work, and also articles of interest to the cotton producers are at various times sent from the Raleigh office and published in the leading newspapers and farm journals of the state.

Another feature of our work is a weekly price report issued at the Raleigh office every Monday morning and sent to approximately 800 cotton producers throughout the state. The bulletin gives prices and differences between grades at various markets in the state, also prices from the large cotton centres in the belt. This bulletin is always headed with an article in regard to the situation, giving export and consumptive figures. Each classing office is furnished a supply of these bulletins in addition to the regular mailing list. The classers distribute these bulletins to those visiting their offices, that have not already received one by mail. This weekly price report is of great benefit to the producer, as it enables him to keep in touch with other markets, and to compare his market with adjacent markets.

This office, cooperating with the North Carolina State College of Agriculture and Engineering, conducted a six-weeks' school in cotton classing in June and July of this year. There was a total enrollment of 34 for this class. Four hours a day were devoted to practice work and one hour a day to lectures. Mr. P. H. Hart had charge of the school, and was ably assisted by Mr. Jas. I. Johnson, one of our local classers, and Mr. N. H. Darst, of the college, who were, at various times, assisted by members of the extension service, the college and others. During this course, they examined and classed approximately seven thousand cotton samples, of all grades and staples.

In addition to our regular state grades, special graders were examined and appointed at the following places for the purpose of grading cotton stored in warehouses, operating under the State Warehouse System; Fayetteville, Lumberton, Fairmont, Monroe, Dunn, Smithfield, Sanford, Aberdeen, Clinton and Oriental. Cotton grading offices were established at the following places for the cotton season of 1920-1921: Raleigh, Clinton, Tarboro, Monroe, Wadesboro, New Bern and Smithfield.

The following is the number of bales classed by each office for the remainder of the season, beginning December 1: Raleigh, 6,190; Wadesboro, 7,616; New Bern, 12,465; Monroe, 6,274; Smithfield, 7,016; Tarboro, 6,995; Clinton, 2,585. Total for the remainder of this cotton season, 49,141 bales.

The following offices are established for the cotton season of 1921-1922: Raleigh, Greenville, Wadesboro, New Bern and Windsor. This report only covers three months of this season, September, October and November. The number of bales classed by each office for these three months is: Raleigh, 4,252; Wadesboro, 3,334; New Bern, 4,221; Greenville, 1,857; Windsor, 1,441. Total all offices for the three months 15,105 bales.

The total number of bales classed by all offices for the entire year, 64,246 bales.

There are numerous letters on file received from various producers throughout the state who have taken advantage of this service, expressing their approval and appreciation for services rendered.

WAREHOUSE CONSTRUCTION

Numerous inquiries received from all over the state indicate that interest in cotton warehouse developments is active even though construction projects have been held back by reason of the financial stringency and later rise in the price of cotton. By reason of this situation and the present formative stage of the marketing association the services of our engineer, Mr. J. M. Workman, have been directed largely toward a survey of the state aimed to determine the actual and relative advantages of 300 towns as marketing and storage centers for cotton. This study is designed as a guide to the marketing association and to the most intelligent application of state aid and loan funds. It takes into consideration existing trade connections, variety and density of cotton production and its distribution, highways and transportation facilities, financial institutions, and fire protection ratings. It is recognized that development in intelligent and truly economical production must reinforce all marketing accomplishments.

The two warehouses in process of construction are located at Kings Mountain and at Dunn and have an aggregate capacity of 10,000 bales. Both are being constructed with the aid of state loans and in accordance with plans engineered by the Division of Markets. Inquiries indicate that a number of warehouse organizations will be launched in the spring.

WAREHOUSE ORGANIZATION

Mr. T. B. Parker, having charge of the organization work in connection with warehouse construction, reports as follows:

"On account of financial conditions this has been largely a year of office work rather than field activities, therefore actual warehouse construction has been at a low ebb. This was made necessary on account of financial conditions confronting us.

"After attending the 'Acreage Reduction' conference at Memphis where cotton storage warehouses as an adjunct to the cotton holding movement was discussed and endorsed; and after visiting Sanford, in this state, where I discussed the value of cotton storage warehouses, but without effecting an organization; and Elizabeth City, where I met a delegation of farmers and talked over the warehouse situation with them, which may some time result in the building of a warehouse at that place; and visiting Kelford, where I discussed the financial situation with patrons of the warehouse at that place, I was advised that our financial condition made it necessary to cut out all travel possible and otherwise cut down expenses to the minimum, which I did.

"However, when the call came for workers in the cooperative marketing campaign, I responded and made three trips to Johnston county and also spent about a week in Franklin county where I spoke on cooperative marketing. I also made trips to Alexander, Lincoln and Iredell counties in the interest of cooperative marketing. My next out-of-town activities were at community fairs where I acted as judge of exhibits. In the meantime, however, I had inquired in regard to the building of cotton storage warehouses which I advertised against except for temporary purposes until the market-

ing association begins to function and we can better decide as to the best locations for permanent storage warehouses with a view to convenience to the largest number of shippers and as profitable investment. At the same time I suggested the use of temporary warehouses such as tobacco warehouses and other substitutes until we could see our way more clearly as to the best locations for permanent warehouses. I do not think the time has yet arrived, nor will arrive, for the location of expensive permanent warehouses until the Cooperative Marketing Association begins to function and we can cooperate with it in respect to the best location for warehouses. But I think we should wage a campaign for the storage of cotton now, in temporary warehouses where it will be protected from weather damage and enjoy the benefits to be derived from our warehouse system until there shall be an advance in prices that will justify the farmers in putting it on the market.

"It was my desire to visit each cotton storage warehouse this past year and among other things, discuss the situation with managers and patrons so as to get their views and suggestions along lines that might be helpful to us in laying out our work and in forming plans and regulations for the future, but our financial condition precluded such visits. However, I am hoping that another year will place us in condition to make these visits that I may see more of the actual operations of our storage warehouses and in that way get a better insight into their workings."

FRUITS AND VEGETABLES

Organizations

After careful investigation it seemed very evident that the truck growers around Mount Olive were really earnest in their demand for cooperative marketing so the organization and incorporation of the Mount Olive Truckers' Association was completed. Fortunately the growers were able to secure as manager a man with broad experience and with a keen determination to sell only first class stock carefully graded and honestly packed. To offset the shortage of machine sizers in the potato field, a sizer was placed in a grading shed along the tracks at Mount Olive. The season was really a success despite the fact that the directors made the mistake of taking in, after the season began, more members than they were equipped to care for. The most of the members are highly satisfied but believe it best to reorganize under the new Cooperative Law in order to secure the additional protection afforded by it. They also desire to increase the territory served, taking in perhaps Dudley, Calypso, and Faison this coming season. They plan to handle practically all kinds of truck aside from cantaloupes. The latter they have found to be a source of trouble, especially in seasons with weather conditions similar to those of 1921. A new set of By-Laws and a series of crop marketing agreements are now being prepared by the division for their use.

The Scotland County Cooperative Cantaloupe Exchange was organized largely on the initiative of its members, although this office was asked for assistance in preparing an application for a charter for incorporation under the new cooperative law. They had for sale this season around 200,000 crates of Rock Ford cantaloupes, and they appointed inspectors to see that every package was carefully gathered, correctly graded and properly packed. The association guaranteed an honest pack, grade and count.

A similar organization was anticipated by one or two of the cantaloupe growers near Fayetteville, but after careful investigation, it was very evident that the growers themselves did not manifest enough interest in such a proposition to insure success, and so the parties were advised to wait for

another season before attempting an organization. In the meantime they will carry on an educational program and attempt to mould public sentiment in favor of the cooperative effort. It has been the opinion of this division that it is just as important to advise against organization where such seems untimely as it is to render assistance in organization where the prospects are the best.

In an effort to solve some of the sweet potato marketing problems of this section, an organization of sweet potato growers was formed at Rocky Mount. The bulk of the storage crop of Nash and Edgecombe counties was signed up for this association, and a subsidiary storage corporation for handling the potatoes of growers not owning storage was formed. Both the association and the storage companies are organized under the laws of this state and the storage company exists merely for the purpose of serving the association. This deal has been modeled largely after the California plan, and this office has assisted principally in preparing the growers' agreement and cross contract between the association and its local warehouse companies. Similar organizations will be formed at other points in the state as conditions warrant, and all under similar contracts so that it will be easy to federate all into one large central sales organization.

Standardization of Grades and Packages

The grades previously adopted for legal standards in this state have been continued in effect. A careful study was made this year of grades for cucumbers and peaches, with an idea of standardizing them next season. The grades for cucumbers recommended by the Bureau of Markets were adopted as the standard by the Mount Olive Truckers Association this season, and were found very satisfactory. The Mount Olive section shipped as high as forty cars of cucumbers in a single day. The grades recommended by the Bureau of Markets for peaches were modified slightly to suit the needs of the Sand Hill Fruit Growers Association with headquarters at Aberdeen. They had about 700 carloads of peaches this year and employed an expert packer from Georgia to supervise the grading and inspection work. They used the grades on their crop of Belle of Georgia and Elbertas, their early varieties being excluded this season because they were unable to put the grades into operation so soon. We believe, judging from this year's experience, that with only minor changes, the U. S. peach grades will be readily adaptable to the North Carolina crop.

The strawberry grades were enforced in both leading strawberry sections this season, and as a result North Carolina strawberries sold as well as those from any other section of the Northern markets. The deceptive pack has been eliminated to a large extent and public sentiment alone within a year or two will be sufficient to prevent a return to the old system. The grades for potatoes and sweet potatoes are being continued, but a serious shortage of funds has limited the field work to a very large extent.

Considerable improvement has been made in the grading and packing of all fruits and vegetables as a result of our work under the State Grading Law in the enforcement of grades for potatoes, sweet potatoes, strawberries and apples. In all our work with enforcement of State Law on grades, we have endeavored to be lenient and to proceed slowly. The work has been largely educational and we find we secure best results by personal work with the larger growers, explaining to them the serious needs for this work. In this way it takes only a season or so to create an overwhelming public sentiment in favor of the improved practices, and deceptive packing is now very un-

usual in the section in which we have worked, although three years ago it was a general rule.

Little work has been done in the line with standardizing packages, although we have repeatedly recommended to individual growers the need for standardization along this line.

DISSEMINATION OF MARKET INFORMATION

In cooperation with the Federal Bureau of Markets, this division supplied the men for operating the Strawberry Daily Market Reports from Chadbourn again this season. The season was unusually early and quite short. It was a very successful one for the growers. Good quality stock averaged around $5.75 to $6.00 per thirty-two quart crate. Shipments this year were 476 cars as compared with 446 last season, and judging from the new acreage now being set, we may expect from 600 to 700 cars next season. Eighteen daily reports and a summary were mailed to a list of about 400 growers.

The apple grading and packing schools planned for the western counties were not held this season on account of the almost total failure of the apple crop, and the only exhibit made was in connection with the crop reporting service of this division at the State Fair.

AGRICULTURAL STATISTICS—CROP REPORTING SERVICE

The report of Mr. Frank Parker, agricultural statistician, follows:

The present year has been one of growth in the states statistical phase of agricultural economics—this in the face of added responsibilities, change of quarters and environment. The demand for and appreciation of this form of information has been the best evidence of its worth-whileness, industrial agencies having offered to supplement our funds.

A mass of data would be tiresome, so suffice it to say that the Cooperative Crop Reporting Service, even with deficient funds, has handled 150,000 pieces of mail; prepared an average of three reports a week, the whole involving millions of calculations and responsibility of their accuracy.

Crop statistics, so definite in its meaning, has caught the interest of all. The marketing field has recognized this deficiency in their information. They and the public want to know the marketing statistical trend. The marketing division, the Extension Service and the state newspapers are greatly interested in getting it developed. The Board in May combined the marketing and statistical work for the purpose of building up the marketing statistical service.

PUBLICATIONS

There are 270,000 farms in North Carolina. Each operator should benefit by the satisfaction of knowing crop and market trends. This information is available, but not the means of getting it to them. Printed results presented in simple and comparable form are essential to this end. It will be like preparing for, planting, cultivating and harvesting a crop and using but little of it, to continue as we do now.

CREDIT UNIONS

There are thirty-three credit unions in the state of North Carolina. No new unions were organized during the past year, but six are now being organized. Most of the unions have suffered from the slump in the prices of farm products. In only a few of the unions have deposits amounted to much. The chief business of the credit unions this year has been borrow-

ing from the banks and lending to the members. Because of the bad crops and low prices, loans in some of the unions have not been repaid promptly. But the credit committees have pursued the policy of requiring all notes not met when due to be renewed and new endorsements given where necessary. The credit union work can be most aptly described as having been at a standstill during the past year.

But in nearly every community where the credit unions have been in operation, the members unanimously agree that the unions are indispensable for meeting the farmers' financial needs. In two of the unions, meetings were called for the purpose of considering dissolution, but after the matter was thoroughly discussed, both unions voted unanimously to continue. In ten unions, the secretary-treasurers report that the unions were able to borrow funds last year when it was impossible for the members to borrow as individual farmers.

Where the bankers are acquainted with the credit unions, their purposes and their work, the unions seem to have no trouble in borrowing all the funds they need. Bankers interviewed in several counties where credit unions are in operation, stated that they preferred making loans to farmers through their unions rather than to farmers individually. But in some of the towns, the bankers seem to be unaware that there is a law providing for credit unions. In these sections where farm supplies are bought largely on time, the credit unions must depend on the banks to furnish them loans. It is highly important that the bankers become acquainted with the work of the unions, and that mutual confidence and cooperation between unions and banks be established.

The unions are doing their most effective work in those communities where there are no banks convenient, and among those farmers without banking connections who need to borrow money. In the little town of Valdese which has no bank, its credit union has become a veritable bank in every respect. The unions are proving to be unusually helpful among the colored farmers in Wake, Columbus and Johnston counties. The colored farmers as a majority have no banking connections. The credit unions, chiefly under the direction of their local agricultural agents, have served as agencies for getting credit from the banks. The cooperative buying of fertilizers and food and feed supplies has become quite important a part of the work of the credit unions among the colored farmers.

About two-thirds of the unions have gone ahead with their usual business during the last year. The other third has marked time, some of them doing practically no business during the last year.

Less than half the unions have been sending in their regular monthly reports since January 1, 1921. Only seven of the thirty-three unions made the annual report required by law on last January.

In seven of the thirteen unions visited since September 15, 1921, the books of accounts were found to be poorly kept or out of balance. Keeping the accounts seems to be one of the most difficult parts of operating the credit unions.

The members of the unions have missed very much the *Credit Union News*. The discontinuance of this sheet seems to have had a bad psychological effect on the members in that they got the impression that the work in other unions was lagging.

Respectfully submitted,

B. F. BROWN,

Chief Division of Markets and Rural Organization,

State Superintendent of Warehouses.

REPORT ON FARM DRAINAGE

To the Director: I hereby submit the annual report on drainage conducted under a cooperative agreement between the North Carolina Department of Agriculture and the United States Department of Agriculture. This report covers the crop year November 20, 1920, to November 30, 1921.

The drainage division suffered the loss by death on May 17, 1921, of H. M. Lynde, senior drainage engineer, Bureau of Public Roads, U. S. Department of Agriculture, who has been in charge of this work. The writer has been in charge of the work since his death, and was transferred from the N. C. Department of Agriculture to the Bureau of Public Roads, U. S. Department of Agriculture, as drainage engineer on August 2, 1921. Since May 17, 1921, the office has had but one man available for carrying on its projects.

The work has been conducted chiefly along the same lines as in previous years. In general, the extension part of our program consists (1) in assisting farmers in the improvement by drainage and terracing of lands now under cultivation and (2) in making preliminary and reconnaissance examinations for drainage districts desiring to make drainage improvements.

Upon request, either from the county agent or the farmer, the drainage engineer makes preliminary examinations, surveys, designs, estimates, specifications and reports for tile drainage projects on the farm. A blueprint is sent to the farmer showing the complete system of drains. When the farmer is ready to install the tile, certain drains are staked out in the field and instructions given in the proper methods of construction.

Terraces are laid off in entire fields, and instruction is given in the use of the farm level and in terrace construction. The elementary priciples of the use of the farm level in terrace location are taught at boys' club encampments. County agents in the counties needing terraces are instructed in methods of terrace location and construction and the levels used in this work are tested and adjusted by the engineers of this office.

The engineer also makes preliminary examinations of drainage districts. The proposed district is visited and from all available data a report is prepared, accompanied by a map, copies of which are furnished to interested parties. The method of organizing a district under the State Drainage Law is outlined. The following summary gives a fairly accurate idea of the amount of work done along these lines:

Farm Drainage

During the past twelve months, 33 farms situated in 17 counties, have been visited for the purpose of giving assistance and advice in tile drainage. The areas of these tracts ranged from 4 to 1820 acres with a total area of about 3,300 acres. Preliminary surveys for tile drainage have been made and reports issued on 12 farms, with a total area of 2,528 acres. Stakes and grades for construction have been given on 10 farms for the installation of 35,790 feet of tile, approximately 7 miles.

One hundred and eleven farms, situated in 21 counties have been visited for the purpose of giving assistance in the location and construction of terraces to prevent hillside erosion, the total length of terraces laid out being approximately 284,500 feet, or 54 miles.

Drainage Districts

Eleven examinations of a preliminary or reconnaissance nature have been made and reports issued covering an area of 52,450 acres.

Miscellaneous

The results of experimental work and other general information have been published from time to time in the Extension Farm News and publicity given in other ways. Mr. Lynde addressed the Southern Section of the American Society of Agricultural Engineers at Lexington, Ky., on the experimental work done by this office and visited Ohio and Indiana studying drainage problems there. The engineers also attended the N. C. State Drainage Association Convention at Elizabeth City, N. C., and discussed tile drainage and drainage district problems. Information was given to interested parties regarding drainage conditions in this state, including engineers, representatives from the U. S. Census and corporations and individuals interested in drained or swamp lands of the state. A special report was issued on the causes of silt deposition on Second Broad River, Rutherford County. Studies were made on building arrangement and landscape design for two farmsteads.

The past year has been notable for the amount of work directed toward the prevention of erosion. The calls on the engineers of this office have been steadily increasing year by year, for the purpose of locating and giving demonstrations in terracing. Notwithstanding the rather high prices of tile during the greater part of the year, there has been a considerable increase in the amount of tile installed. Both the number of drainage districts examined and the acreage covered by these districts has increased over the report of last year.

Respectfully submitted,

F. O. BARTEL,
Drainage Engineer.

REPORT ON FAIRS AND EXHIBITS

To the Director: A total of 185 fairs were held this year including 22 negro fairs, at which extension workers assisted. This number was divided as follows: 130 community; 43 county; 10 district; 2 State (white and negro).

Because of the financial condition of the Department of Agriculture, no premiums were given this year. The home and farm agents helped in organizing community fairs and in holding meetings for the study of the selection of exhibits, standardizing community products, creating community interest, etc. At all the fairs, the exhibits were judged by county agents and other extension workers. At all these fairs, those judging explained the reasons for awards whenever an opportunity was given them, thus making the fairs more truly educational.

At the State Fair, assistance was given by extension workers in putting on the agricultural, home economics and livestock exhibits.

Probably the most interesting work of the kind was the exhibits and demonstrations given by the corn and poultry clubs. Five teams of three each were selected from as many counties to demonstrate the lessons taught through club work. Sampson, Buncombe, Cleveland, Stanly and Gaston counties had teams giving corn demonstrations. Each team of three was to demonstrate and explain some stage of the work in growing corn. The following subjects were used: care of seed corn; selection of seed corn; preparation of land for and the cultivation of the corn crop.

The following counties had poultry teams present: Buncombe, Catawba, Cumberland, Gaston, and Lincoln. The following phases of poultry work as taught through club work were demonstrated: poultry house construction and poultry house appliances; feeding and care of young chicks; feeding and care of mature hens; lice and mites and their prevention; culling the farm flock; marketing eggs and poultry products.

These demonstrations by the club members did much to show the general public just what the extension service is trying to do for the young folks on the farm. The interest created was shown by the many questions asked by those who visited the demonstrations.

One feature of this work that has created a considerable amount of favorable comment was the special livestock truck of the animal industry division. This truck has been fitted up to carry a number of purebred sheep from the Experiment Station Farm, together with products from wool, including blankets made from North Carolina wool by North Carolina mills. The truck has been in charge of Mr. George Evans, specialist in sheep field work. Most of the larger fairs of the State were visited by this exhibit.

Respectfully submitted,

J. M. Gray,
Chairman Fair Committee.

REPORT OF THE DIVISION OF PLANT PATHOLOGY

To the Director: I submit herewith my report of extension work in plant pathology for the fiscal year ending June 30, 1921. The writer assumed the duties of extension plant pathologist March 1, 1921, succeeding Dr. R. A. Jehle, who resigned January 1, 1921. The report summarizes also the work done by Dr. Jehle for the first half of the year from July 1, 1920 to January 1, 1921.

Cotton Anthracnose

The work on cotton anthracnose is a continuation of the work begun in 1918 in cooperation with the department of plant breeding. The object of the work is to secure high-grade cotton seed free from the cotton anthracnose organism and thereby eliminate the main source of infection, as this disease is carried over from year to year within the seed. The economic importance of such work when accomplished and widely practiced is readily apparent when we know that the annual loss caused by cotton anthracnose to the cotton growers will average from 10 to 15 per cent.

In the fall of 1920 over 20,000 bushels of inspected seed were made available for the 1921 planting. A large number of these fields were inspected this fall and less than 1 per cent of cotton anthracnose was found in fields where selected seed were used, while cotton grown from fields not inspected and from unselected seed often showed as much as 10 to 70 per cent of the bolls infected with cotton anthracnose. The presence of the boll weevil in the counties adjoining South Carolina will cause a considerable reduction in the amount of selected cotton seed for sale this winter and may necessitate the changing of plans or the discontinuance of the work in these counties another year. This year, over 1,000 acres of cotton were planted by cooperative growers and breeders in cooperation with their respective county agents from which about 25,000 bushels of high-grade seed for planting purposes in North Carolina in 1922 will be obtained. Work with cooperative growers was conducted in the following counties this year: Anson, Cabarrus, Columbus, Craven, Edgecombe, Hertford, Johnston, Lenoir Mecklenburg, Montgomery, Nash, Onslow, Pasquotank, Pitt, Robeson, Sampson, Union and Wayne.

Cotton Wilt

The work with cotton wilt, begun in 1918, was continued. The Dixie-Triumph cotton, a variety of wilt-resisting cotton which has been bred for boll weevil conditions was tested in Edgecombe, Wayne, Johnston and Sampson counties, in cooperation with the respective county agents. These demonstrations proved conclusively that this type of cotton can be grown on wilt infested land and because of its earliness can be recommended where the boll weevil is present.

Tomato Diseases

The spraying demonstrations begun in the spring of 1920 were continued last fall. These demonstrations were located in Transylvania, Mitchell and Avery counties. In all of these demonstrations, the vines were pruned and tied to supports to facilitate spraying, beginning soon after they were transplanted from the seed bed. The vines were sprayed every two weeks

until they were killed by frosts. In the following table are indicated the results in all of the demonstrations in which accurate comparisons were made in yield between the different plots:

Treatment	*County*	*Location*	*Lbs. Fruit per Plant*
Unsprayed	Transylvania	Quebeck	3
Plain Bordeaux	"	"	3¼
Bordeaux fish-oil	"	"	4¼
Unsprayed	Mitchell	West of Toecane	3½
Plain Bordeaux	"	" " "	5½
Bordeaux fish-oil	"	" " "	8
Unsprayed	"	South " "	¼
Plain Bordeaux	"	" " "	13½
Bordeaux fish-oil	"	" " "	9½

The plain Bordeaux mixture was a 5-5-50 solution and the Bordeaux fish-oil was a 5-5-50 Bordeaux with 2½ lbs. of rosin-fish-oil soap added to every 50 gallons of the mixture.

Besides the demonstrations in the table, one additional demonstration was conducted in Transylvania County at Brevard, one at Spruce Pine in Mitchell County, and five in Avery County. In every one of these demonstrations the results were similar to those outlined in the table. The yield from the sprayed vines was always larger than the yield from the unsprayed vines and after late blight attacked the unsprayed vines, only a very little or no fruit was obtained. When late blight did not attack the unsprayed vines, but when they were attacked by other diseases such as Septoria leafspot and fruit rots, the difference in yield between the sprayed and unsprayed vines was not as gerat. The yield was greater in the vines sprayed with Bordeaux fish-oil than those sprayed with plain Bordeaux only when Septoria leafspot was present.

In Avery and Mitchell counties, it is estimated that at least 500 people sprayed their tomato vines as a result of last year's demonstrations and a large additional number in those other counties where the demonstrations were conducted.

Tomato spraying has become a common practice in the counties where these demonstrations were conducted and for that reason, it was thought wise to discontinue them except when supervised entirely by the county agent.

Apple Diseases

The apple spraying work begun in cooperation with the divisions of horticulture and entomology, to demonstrate the best cultural and pruning methods for apples and the best method for spraying them to control insect pests and plant diseases, were continued but owing to the fact that several heavy frosts in April killed practically all of the fruit, only two applications of the spray were applied this spring, the dormant and the pink. There are no data available to demonstrate the value of spraying unless we consider that the apple trees were practically defoliated this summer because left unsprayed.

Irish Potato Diseases

Since many of the most dreaded and destructive potato diseases such as Mosaic, Curley dwarf and Sprindling Sprout are being introduced into the

south from the north, in Irish potato seed, it would be a great advantage in the control of these diseases if seed could be grown within the state for the eastern potato districts instead of getting them from Maine. There are many other factors to be considered which would make it better if seed potatoes could be grown in this state, and a few of the most important are: the elimination of the annual large loss from shipping long distances; losses from freezing or overheating while in the car; and losses from various rots while in storage.

On account of the similarity of climatic conditions in the mountains where the elevation is 3,000 to 4,000 feet, to those where seed potatoes are usually grown, it was thought that seed grown in such locations in the state might be as good as Maine-grown seed. In order to determine whether or not such was the case, Irish Cobbler seed from Maine was planted in Avery county, where the elevation is about 4,000 feet. Arrangements were made to test the progeny from these seed in Pasquotank, Beaufort, Wayne, and Columbus counties. Demonstrations were located in these counties, planting seed from the same source in Maine, eleven pecks of seed being used from the two different sources.

The results from this season's demonstrations are decidedly in favor of the mountain grown seed, as will be indicated in the summary for each individual test. In all of the tests the potatoes were planted under the same conditions, cultivated the same, fertilized the same and sprayed the same number of times. The soil type was identical and the conditions were as similar as could be found.

The demonstration in Columbus county was located near Chadbourn, the results being about three to two in favor of the mountain grown. Both strains of potatoes were planted about the last of February. They came up the last of March and were severely bitten twice by frosts in April. The mountain grown potatoes appeared the best at the very beginning, giving a more perfect stand and recovering quicker from frost injury and gave a larger yield than the Maine-grown seed.

The demonstration in Wayne county was located near Mt. Olive. Unfortunately, the soil selected there was poorly drained and because of the heavy rains during April and May the conditions were not favorable for potatoes. In this test the stand was poor but decidedly better for the mountain-grown seed. The results were rendered valueless because the grower replanted his plot where Maine-grown seed was used. Comparative yields were not obtained.

The demonstration in Beaufort county was located near Aurora in one of the largest potato sections of the state. In this test, the mountain-grown seed showed the typical vigorous appearance, recovered quicker from the frost injury, matured slightly earlier than the Maine-grown, and yielded two bushels more than the Maine-grown.

The demonstration in Pasquotank county was located near Elizabeth City, and the results obtained from this test were very similar to the others. The grower replanted the Maine-grown seed plot because of the imperfect stand, and for this reason the results are not to be taken as conclusive.

To summarize the results from the four demonstrations, the most important differences noted were: the mountain-grown seed gave a more perfect stand, the plants were more vigorous, and just as good or a better yield was ob-

tained. In all cases, the mountain-grown seed produced just as early maturing potatoes as those from the north.

The value of this work is two-fold: as an educational one it cannot be equaled for demonstrating the most efficient means for the control of plant diseases and especially potato diseases; and of secondary importance is the possibility of establishing a seed potato industry in this state.

General

Many individual fruit growers and farmers were visited in company with county agents and instructions given how to recognize and control plant diseases. Special meetings were held in a number of the counties and farmers addressed on the subject of plant diseases. Many personal letters and literature discussing plant diseases were sent out in the mails. Several articles were published in the newspapers.

Respectfully submitted,

ARTHUR C. FOSTER,
Extension Plant Pathologist.

REPORT ON FARM ENGINEERING

To the Director: The main projects in the work during this year were water supply and sewerage disposal, hydro-electric development, farm machinery, farm buildings, concrete constructions and home lighting plants.

The work along all these lines has been carried to the people through the press, making trips to see individuals where there were several of these who had written in, by visiting county agents who had a number of these projects in mind, and by holding meetings and putting on practical demonstrations.

Home Water Supply and Sewerage Disposal

One hundred and twelve actual propositions looked over and plans given, together with bill of materials and estimate of cost. These include everything from the very simplest to the most elaborate systems, and the different types of supply from springs to deep wells. Sixteen actual demonstrations were put on, after all the materials had been gotten on the ground. In these cases the neighbors are invited to look it over, and a great deal of interest has been shown by the other people who were interested in similar propositions.

Hydro-electric Development

Sixteen locations for small hydro-electric power plants were looked over, and estimates of the cost given, together with amount of power to be expected; also designs for the dams to be used. Only a very small per cent of these have been developed due to high cost.

Farm Machinery

In connection with the other work, most of the farmers are usually interested in machinery of some kind, and inquiries along this line came in from practically every man visited, although a very small per cent have purchased machines this year where they could possibly do without them. One hundred and thirty-five farmers were advised personally about machines of various kinds.

Farm Buildings

This work has been called for more times during the past several months of the year than any other. In fact it has not been possible to keep up with the calls for new plans that had to be designed. Two hundred and sixty sets of plans for buildings have been sent out. The bill of materials are sent with plans. Six different barns have been supervised during construction. These were in locations where barns of this type had not been built before, and the carpenters not well acquainted with the type of construction. Trips were made often enough to see that plans were followed. Thirty new sets of plans have been gotten up this year to cover some of the calls for plans that we did not have. The plans gotten up and sent out have included all the various buildings found on the farm, from septic tanks, water towers, ice, hog, and poultry houses, cattle, sheep, and horse barns, corn cribs, etc., to dwelling houses.

Concrete Construction

This work comes in more or less with all the farm building plans in giving specifications for foundations and floors; also with the home-made septic tank, water troughs, concrete dams, etc.

Home Lighting Plants and other Conveniences

This work has been taken up and pushed, especially in connection with the water supply work, and in practically all cases with assistance with water supplies. Advice has been given regarding various home lighting plants and what could be expected of them.

Correspondence has been carried on regarding all these subjects, where people were interested. More calls have come in from people who had seen some of the actual demonstrations in the various sections, than from any other source.

One club encampment was attended where instructions were given in rope tying and gas engine operations.

Respectfully,

E. R. RANEY,
Extension Farm Engineer.

FINANCIAL REPORT

The North Carolina Agricultural Extension Service, in account with the United States Appropriations under Smith-Lever Act, 1920-1921.

DR.	Smith-Lever Funds	
	Federal	State
To receipts from the Treasurer of the United States and from State sources as per appropriations for fiscal year ended June 30, 1921, under Act of Congress approved May 8, 1914 (Smith-Lever Act).	$185,970.33	$175,970.33
CR.		
By Salaries	136,027.74	14,992.48
Labor	324.75	237.32
Printing and distribution of publications	5,236.99	5,244.81
Stationery and small printing	3,004.37	610.38
Postage, telegraph, telephone, freight and express	1,458.43	780.99
Supples	475.13	628.21
Library	22.75	32.82
Tools, machinery, and appliances	155.62	128.83
Furniture and fixtures	2,089.77	149.27
Scientific apparatus and specimens	21.50	----------
Traveling expenses	36,526.78	18,233.22
Contingent expenses	626.49	----------
Totals	$185,970.33	$175,970.33

We, the undersigned. duly appointed auditors of the corporation, do hereby certify that we have examined the books and accounts of the Extension Division for the fiscal year ended June 30, 1921; that we have found the same well kept and properly classified; that the receipts from the Treasurer of the United States were $185,970.33, under the Act of Congress of May 8, 1914, and the corresponding disbursements $185,970.33, leaving a balance of nothing; that there have been expended as an offset to the Federal Smith-Lever funds $175,970.33, State funds, for all of which proper vouchers are on file and have been by us examined and found correct.

And we further certify that the expenditures have been solely for the purposes set forth in the Act of Congress, approved May 8, 1914, and in accordance with the terms of said Act.

(SIGNED)
C. F. TOMLINSON,
T. T. BALLENGER,
J. F. DIGGS.
Auditors.

(SEAL)
Attest: A. F. BOWEN, *Custodian.*
Examined and approved as correct.

B. W. KILGORE,
Director of Extension.
B. R. LACY,
State Treasurer.

Summary Statement of Expenditures by Projects Showing Classification of Expenditures From All Funds, Except Those From the State Department of Agriculture, Used for Extension Work

	Total	Administration	Printing and Distribution of Publications	Farm Demonstration	Home Economics Clubs	Negro Boys' Clubs	Fairs and Exhibits	Farm Management	Agronomy Extension	Animal Industry
Salaries	$394,828.73	$ 15,858.55	$	$211,352.99	$123,409.99	$1,100.00	$1,041.25	$ 322.40	$ 11,241.66	$ 690.95
Labor	562.07	91.00		233.75	172.57				48.25	
Printing and distribution of publications	10,481.80		10,481.80							
Stationery and small printing	3,614.75	868.78		2,063.08	319.45				269.43	26.87
Postage, telegraph, telephone, freight and express	2,239.42	681.16		467.90	342.10		25.00		247.90	281.91
Supplies	1,103.34	121.85		256.85	220.93				247.24	94.63
Library	55.57	22.75			27.09				5.73	
Tools, machinery and appliances	284.46	2.80			10.24					152.83
Furniture and fixtures	2,239.04	1,086.57		997.70	5.50				143.77	5.50
Scientific apparatus and specimens	21.50			21.50						
Traveling expenses	54,760.00	1,008.99		31,947.61	8,465.21	70.97		84.98	2,293.79	2,810.42
Contingent expenses	626.49			626.49						
Total Expenditures	$470,817.17	19,742.45	10,481.80	247,967.87	132,973.08	1,170.97	1,066.25	407.38	14,497.77	10,283.91

Summary Statement of Expenditures by Projects Showing Classification of Expenditures From All Funds, Except Those From the State Department of Agriculture, Used for Extension Work

	Markets and Rural Organization and Cotton Grading	Bee-keeping	Dairy Extension	Drainage Extension	Entomology	Horticultural Extension	Plant Diseases	Farm Forestry	Farm Engineering
Salaries	$ 865.27	$ 860.00	$ 7,321.47	$ 22,000.00	$ 1,945.23	$ 1,450.00	$ 3,300.01	$ 3,249.96	$ 2,400.00
Labor			7.50				9.00		
Printing and distribution of publications									
Stationery and small printing	18.14		21.50			27.50			
Postage, telegraph, telephone, freight and express	39.68		119.37			20.00	6.94		7.46
Supplies			135.05				24.99		
Library									
Tools, machinery and appliances			99.88				18.71		
Furniture and fixtures									
Scientific apparatus and specimens									
Traveling expenses									
Contingent expenses	214.44	484.84	3,977.41	618.84	377.10	509.62	868.66	299.10	732.02
Total Expenditures	1,137.53	1.344.84	11.682,18	2,814.84	2.322,33	2,007.12	4,228.31	3,549.06	3,139.48